HOWARD R. GREEN COMPANY
CONSULTING ENGINEERS
4250 GLASS RD., N.E. • P.O. BOX 9009 • CEDAR RAPIDS, IOWA 52409 • Phone 319/395-7805

January 9, 1981

Iowa Department of Environmental Quality
Henry A. Wallace Building
900 East Grand
Des Moines, IA 50319

Attn: Mr. Eugene Evans

Re: Special Waste Authorizations
Amana Refrigeration, Inc.

Dear Mr. Evans:

As you are aware Amana Refrigeration, Inc. is currently the holder of six (6) Special Waste Authorizations for disposal of industrial wastes in the Cedar Rapids landfill. These authorizations were issued on April 30, 1980 and expire on April 30, 1981.

Renewal of certain of these authorizations is being requested. However, changes have occurred with regard to two of the wastes covered by these authorizations while others have been affected by the recent implementation of hazardous waste regulations by EPA. Therefore, we are hereinafter addressing each of the wastes with regard to renewal of the Special Waste Authorizations.

No. 57375043080-1 (Parts Washing, Sludge, Rolling Machine Waste, Cleaner Liquid Waste and Tramp Oil)

An increase in production capacity is resulting in a like increase in the quantity of parts washing sludge and cleaner waste. This increase is approximately 1200 gallons/month or an increase from the present permitted quantity of 6000 gallons/month to 7200 gallons/month. No change in the characteristics of this waste will occur.

The quantity (300 gallons/month) and characteristics of the tramp oil will be unchanged.

It is therefore requested that this authorization be renewed for a period of one year with recognition of the above-mentioned increase in waste volume.

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Re: Special Waste Authorizations
Amana Refrigeration, Inc.

No. 57375043080-2 (Phosphatizing Parts Washer Sludge)

No change in quantity or waste characteristics is expected. Therefore, renewal of this authorization for a period of one year is requested.

Hazardous
No

No. 57375043080-3 (Electro-Deposit Paint Sludge)

As indicated in Title 40 Code of Federal Regulations, Part 261.31 as amended on July 7, 1980 and published in the Federal Register, Volume 45, No. 138, Wednesday July 16, 1980, this waste was declared hazardous and bears the EPA hazardous waste designation F018. The effective date of this declaration was to be January 16, 1981. We have since learned that EPA has removed this particular waste from the hazardous listing and that subsequent verification will be published by EPA in the Federal Register prior to January 16, 1981.

Removal of this waste product from the hazardous list does not preclude its being hazardous by virtue of one of the characteristics given in 40 CFR Part 261, Subpart C (Part 261.20 through 261.24). Laboratory tests were therefore performed on this waste to determine its hazardous characteristics. The results of these tests indicated that the waste is hazardous. As a result it cannot be placed in the Cedar Rapids landfill, rather it must be disposed of in a secured hazardous waste disposal site. Therefore, renewal of this particular authorization is not requested.

No. 57375043080-4 (Paint Spray Booth Sludge & Treated Paint Spray Booth Sludge)

These two wastes were also declared hazardous by EPA effective January 16, 1981 and bear the EPA hazardous waste designation F017 and F018 respectively. Again, these wastes are to be removed from the hazardous listing prior to the January 16th date. As a result consideration need be given only to the hazardous characteristics of 40 CFR Part 261, Subpart C.

Extensive laboratory testing of these wastes has been accomplished with the results indicating that neither is hazardous and therefore they should not be considered as a hazardous waste. On this basis Amana Refrigeration

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has petitioned EPA to delist these two particular waste materials. In view of the recent EPA action the delisting petition is now mute. In addition, since the laboratory results do not indicate hazardous by virtue of the chemical characteristics, disposal in the Cedar Rapids landfill may again be considered. In support of this request we are enclosing herewith a copy of the delisting petition as submitted to EPA. This document should provide sufficient data for the Department and the local landfill authorities to make the necessary evaluation and concur with our determination of non-hazardous.

As you are aware the Department voided all Special Waste Authorizations for paint wastes effective January 16, 1981. Through a January 7th telephone discussion with John Vedders, we are advised the Department recognizes the recent EPA action regarding paint waste. However, we are further advised that the Department does not intend to take any formal action regarding reinstatement of the voided authorizations. Rather, it was suggested that industries so affected reapply for a renewal of the voided authorizations.

It is therefore requested that, following consideration of the delisting petition attached, the authorization for these paint wastes be renewed for a period of one year.

Since the "voiding" action will not be revised, disposal after January 16, 1981 will not be allowed. It is therefore requested that temporary authorization be granted until such time as the formal renewal can be processed. This will eliminate the need for storing this waste during this interim period.

No. 57375043080-5 (Zinc Phosphate and Chrome)

Amana is preparing to make a change in the treatment process which generates this waste. As a result the sludge produced has different characteristics than that covered by the current authorization. The treatment process involved utilizes caustic (sodium hydroxide) for neutralization and pH control. Through pilot studies conducted by

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Amana it has been found that the hook strip or Kolene salts can be dissolved in water to produce a suitable caustic solution. This solution has been successfully used as a substitute for the caustic feed required in the treatment process.

As a result of the hook stripping process the Kolene salts contain the heavy metals chromium, zinc and lead. These metals are present in the pigments of the paints which accumulate on the hooks. The end result is that the use of the Kolene caustic solution increases the chrome and zinc to the waste stream being treated. In addition, lead is introduced as a new constitutent.

The sludge produced by this treatment process is not a listed waste and, in that regard, not hazardous. Consideration has been given, however, to the potential for hazardous classification due to the characteristics, particularly EP toxicity of the metals. Laboratory testing was conducted on this waste sludge with the results being as follows.

Characteristics	E.P. Toxic Value
Chromium	<0.002 mg/l
Lead	1.5 mg/l
Zinc	17.5 mg/l

As these values indicate this waste does not fall within the hazardous classification for EP toxicity. Further, no increase in the quantity of this material is anticipated. It is therefore requested that this authorization be renewed for a period of one year.

No. 57375043080-6 (Waste Paint Decant, Anolyte & Permeate Treatment Sludge)

This material is paint waste and carries the EPA hazardous waste designation F018. However, the same situation exists regarding removal of these materials from the hazardous waste listing. Again, laboratory tests were conducted regarding EP toxicity with the results indicating these wastes are not hazardous by virtue of their characteristics.

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The attached delisting petition also addresses these materials and should provide the necessary review information. It is therefore requested that the the Department, in consideration of the data contained in this petition, renew the authorization for a period of one year.

Again, because of the "voiding" situation, temporary authorization to allow disposal beyond January 16th and until a formal renewal can be processed is also requested.

We trust this information will be sufficient to make the necessary determinations regarding requested authorization renewals. However, if any additional data is needed, do not hesitate to give us a call.

Very truly yours,

Gene H. Fritch, P.E.

mp
enclosure

cc + encl: Dave Hogan
Leonard Rettig

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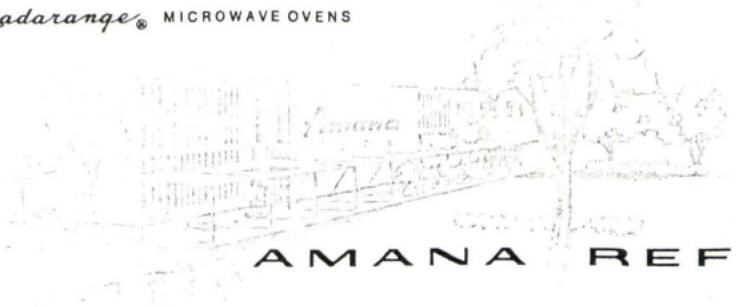


AMANA REFRIGERATION, INC.

AMANA, IOWA 52204

Mr. Douglas M. Costel, Administrator
United States Environmental Protection Agency
401 M Street S.W.
Washington, D.C. 20460

Dear Mr. Costel:

The following is intended to serve as a Petition for Delisting of three Hazardous Wastes and the same is being submitted in accordance with the requirements of Title 40 Code of Federal Regulations, parts 260.20 and 260.22.

I. Petitioner's Name and Address

Amana Refrigeration, Inc.
Amana, Iowa 52204

EPA I.D. Number IAD 000610436

II. Statement of the Petitioner's Interest in the Proposed Action

Amana Refrigeration, Inc. is the manufacturer of household refrigerators and home and farm freezers (SIC Code 3632) and microwave ovens (SIC Code 3631). The manufacturing process involves the painting of the steel cabinets for these appliances. The painting process results in the generation of certain paint waste which has been classified by EPA as a hazardous waste in accordance with Title 40 Code of Federal Regulations, part 261.31 as amended on July 7, 1980 and published in the Federal Register, Volume 45, No. 138, Wednesday, July 16, 1980. The waste so produced has been identified in the above-referenced document as "Paint residues or sludges from industrial painting in the mechanical and electrical products industry" and bears the EPA hazardous waste number F017.

Amana Refrigeration currently provides for treatment of two types of these wastes, and the resulting sludges have been classified in the above-referenced Federal Register as "Wastewater treatment sludge from industrial painting in the mechanical and electrical products industry", bearing the EPA hazardous waste number F018.

As a generator and treater of paint waste, the recent hazardous classification by EPA is of obvious interest to Amana Refrigeration. Specifically, these regulations impose certain restrictions on the storage and treatment of this waste. In addition, the regulations impose similar restrictions on the disposal of both the initial paint waste and the sludge resulting from the treatment of same. The disposal factor is of major importance due to the fact that there are no secure hazardous waste disposal sites in the State of Iowa. Indications are that no such sites will be available in the foreseeable future. As a result it will be necessary to accomplish disposal of both the paint waste and treatment sludge outside of the State of Iowa at a current estimated annual cost of $115,000.

Delisting of these three wastes would provide the option for disposal in existing approved landfills in accordance with current regulations established by the Iowa Department of Environmental Quality and the local landfill authority.

III. Description of the Proposed Action (Delisting)

It is proposed that the Administrator review the data contained in this Petition. Further, after evaluation of the facts involved, the Administrator publish in the Federal Register a regulatory amendment declaring the paint wastes referred to in this Petition non-hazardous.

IV. Statement of Justification for Delisting and Supporting Documentation

40 CFR, Part 261.31 as amended on July 7, 1980 indicates that paint wastes (EPA hazardous waste number F017) and paint waste treatment sludges (EPA hazardous waste number F018) are considered toxic, hence the Hazard Code "T". Appendix VII to part 261, as amended on July 7, 1980, indicates the basis for listing these wastes as hazardous by identifying specific substances frequently present in paint wastes in toxic concentrations. Specifically, these substances so identified are:

Cadmium	Cyanides
Chromium	Toluene
Lead	Tetrachloroethylene

The paint waste and paint waste treatment sludges generated by Amana Refrigeration, Inc. do not contain cadmium, cyanides or tetrachloroethylene. The paint waste and one of the paint waste treatment sludges do contain chromium, lead and toluene. The other paint waste treatment sludge contains lead and chromium. As such, delisting under 40 CFR Part 260.22 (d)(1) is not requested. Rather this Petition will address delisting as proposed in Part 260.22 (d)(2) with specific reference to 40 CFR 260.22 (h) and (i) and 40 CFR 261.11 (a)(3)(i) through (x).

260.22 (h)

Demonstration samples of both the paint waste and paint waste treatment sludges.

Samples of the paint waste were taken from all three active paint booths in proportion to the amount of waste produced in each booth. The composite sample obtained covers the operating period of October 1 through October 15, 1980 thereby representing a time span sufficient to ensure uniformity of the waste.

Samples of the two paint waste treatment sludges were individually composited from batch treatment operations occuring from October 8 through October 15, 1980. Again, the composite samples obtained are representative of a sufficient time span to ensure unformity of the two paint waste treatment sludges.

260.22 (i)

(1) The name and address of the laboratory performing the tests on the wastes under consideration is:

Sanitary Engineering Laboratories, Inc.
1922 Main Street, Box 625
Cedar Falls, IA 50613

(2) The names and qualifications of the persons sampling and testing the wastes are:

Sampling: Robert Steiff
Superintendent of Wastewater Treatment
Amana Refrigeration, Inc.
Registered Wastewater Treatment Plant Operator,
Grade III, State of Iowa

Testing: See pages 3 and 4 of Attachments A, B and C to this Petition.

(3) The dates of waste sampling and testing are:

Sampling: Composited from October 1 through October 15, 1980 as indicated in Item IV of this Petition.

Testing: The dates of laboratory testing are indicated on the individual test reports (page 1) included as Attachments A, B and C to this Petition.

(4) Location of the generating facility:

Amana Refrigeration, Inc.
Middle Amana, Iowa 52307

EPA I.D. Number - IAD 000610436

(5) Description of the manufacturing process and treatment operation, feed materials producing the waste and assessment of non-typical waste production.

The manufacturing process from which the paint waste is generated consists of three water-curtain paint spray booths. Overspray is captured by the curtain of falling water which is continuously recycled from a holding tank at the base of each booth. Floating paint solids are skimmed from the surface of the holding tanks and settleable solids are removed from the bottom of the holding tanks. These combined waste products are the paint waste under consideration in this Petition and carry the EPA Designation F017.

The chemical analysis for this material is given in Attachment A to this Petition.

The liquid portion of the holding tank waste is batch treated in a 3,100 gallon tank. The treatment process involves neutralization, precipitation aid (polyelectrolytes) and precipitation of solids as sludge. The resulting sludge is one of the paint waste treatment sludges under consideration in this Petition and carries the EPA Designation F018.

Attachment B gives the chemical analysis for this paint waste treatment sludge.

Another painting process utilized at Amana Refrigeration, Inc. is an electro-deposition process. In this process the objects to be painted are immersed in a water-based paint bath. To prevent this bath from becoming acidic the bath contents is passed through electrically-charged porous plates. Accumulated paint solids are returned to the bath. The resulting liquid, being acidic in nature, is a waste byproduct known in the painting industry as "anolyte".

Following coating of the product in the bath section of the electro-deposition process the product is rinsed with de-ionized water. The resulting rinse water, along with accumulated paint solids, is processed through an ultra-filter. Paint solids removed by the ultra-filtration process are returned to the bath tank. The liquid portion is a waste product and is known as "permeate".

Both the anolyte and permeate are virtually free of suspended solids. However, both contain lead and chromium in solution and they are, therefore, hazardous wastes because of the toxicity of these constituents.

To render these wastes non-hazardous they are combined for treatment. This is accomplished on a batch basis. Sodium sulfide is used to form a lead sulfide precipitate and settling is aided by the use of a polyelectrolyte. The resulting lead sulfide sludge is classified as a hazardous paint waste treatment sludge by virtue of the toxicity of the lead. This is the third material under consideration in this Petition and it bears the EPA Designation F018.

The chemical analysis for this paint waste treatment sludge is given in Attachment C to this Petition.

The feed materials (paints) which produce the waste are manufactured by PPG Industries, Springdale, PA. Attachment D to this Petition is the material safety data sheets for the paints used.

A variety of paint colors are used in the water-wash paint booths which would produce variations in the waste on perhaps an hourly basis. However, on a daily or weekly basis these variations would have a dampening effect, thereby producing a uniform waste. The electro-dep process is constant.

(6) Waste description and estimate of average and maximum monthly and annual quantities.

The paint booth waste (F017) is a liquid containing approximately 64% water and 36% total solids. It has a density of approximately 9.0 pounds per gallon and a pH of 7.4. The solids are acrylic in nature and heavy metals in the form of lead and chromium and the solvent toluene are present in the waste. The average and maximum quantities generated are approximately 17 tons per month or 206 tons per year.

The paint waste treatment sludge from the paint booth waste (F018) is a liquid containing approximately 99% water and 1% total solids. The density of this material is 8.10 pounds per gallon and the pH is 8.8. The solids are acrylic and again chromium, lead and toluene are present in this waste. The average and maximum quantities produced in the treatment process are approximately 8.25 tons per month or 99 tons per year.

The third waste product is the paint waste treatment sludge resulting from treatment of the anolyte/permeate waste. This sludge contains approximately 98% water and 2% solids, primarily as lead sulfide. It has a density of approximately 8.85 pounds per gallon and a pH of 9.2. This material also contains small amounts of chromium (2.0 mg/kg).

The average and maximum quantities generated are approximately 2 tons per month or 22 tons per year.

(7) Discussion of the factors delineated in the respective criterion for listing a hazardous, based on 40 CFR, Part 261.11 (a)(3). References in this section of this Petition to a "background document" apply to the EPA document entitled Paint Application Processes Used in the Mechanical and Electrical Products Industry. This document identifies the toxic constitutents frequently found in paint waste and the toxic effects of same on human health and the environment.

261.11(a)(3)

(i) Nature of Toxicity.

Three of the constituents identified as toxic by the background document are present in various concentrations in the Amana Refrigeration paint waste and paint booth waste treatment sludge. These three substances are chromium, lead and toluene.

Lead and chromium are present in the anolyte/permeate treatment sludge.

(ii) Concentration of Toxic Constituents.

The concentrations of the above-mentioned toxic constituents present in the three wastes under consideration are illustrated in Table I. Also, these concentrations are shown on Attachments A, B and C to this Petition.

TABLE I

Constituent	Paint Waste (Booth)	Paint Waste Treatment Sludge (Booth)	Paint Waste Treatment Sludge (Anolyte/Permeate)
Chromium	920 mg/kg	1.2 mg/kg	2.0 mg/kg
Lead	5,400 mg/kg	350 mg/kg	18,000 mg/kg
Toluene	330 mg/kg	< 10 mg/kg	Not Present

(iii) Potential for migration of toxic constituents under improper management situations.

The three constituents under consideration in this Petition (chromium, lead, and toluene) are all, to a degree, soluble in water and therefore present a certain potential for migration if mismanaged. It therefore follows that the transportation and disposal of wastes containing these constituents must be managed and regulated in such a manner that the potential for migration will be minimized. With such management, particularly for wastes containing small leachable quantities of these constituents, the potential for migration can be virtually eliminated.

The Amana wastes are of this type in that they contain relatively small leachable quantities of these constituents in comparison with the toxic limits established in 40 CFR 261.24, Table I. It is also noted that while chromium and lead are listed as toxic contaminants in the above regulation, toluene is not listed. However, the background document referred to previously in this Petition does adequately address the toxicity of toluene.

It is noted on page 30 of that same background document that the potential for migration of heavy metals has been related to certain leachable values from State Manifest Data, specifically numbers 9, 10, 16, 17 and 19. It is further noted, however, that most of the values shown are well in excess of the allowable values for determining toxicity by the EP toxic test. It is agreed that materials containing such quantities of leachable contaminants have a high potential for contributing to migration. By the same token, wastes which have low leachability characteristics would have a proportionally lower potential for contaminate migration. This is particularly true for the Amana wastes which have leachable values well below the limits established by the EP toxicity criterion.

The background document also contains specific references to ambient concentrations of these three constituents which produce adverse health and environmental effects. For chromium and lead, the noted EP toxic levels are 100 times the recommended ambient values. Presumably, these EP values are not sufficiently high to produce ambient concentrations which would result in adverse health or environmental problems. It follows, therefore, that wastes of the type produced by Amana Refrigeration, which have relatively low EP toxic values, contain an extremely low potential for migration. As a result these same wastes would not have a significant effect on ambient concentrations of these contaminants, and therefore are likely to cause little adverse health and environmental problems.

While no EP toxic limit is given for toluene the recommended ambient level is 12.4 mg/l. The extracts from the paint waste and the paint waste treatment sludge from the wash-water booths produced by Amana Refrigeration contain less than 1.0 mg/l toluene. It would appear, therefore, that since the leachable value is less than one-tenth the recommended ambient value, these wastes will pose no health or environmental problems as related to the potential migration of toluene.

(iv) Persistence of the Constituent.

The toxic constituents chromium, lead and toluene are all capable of persistence in the environment. It is therefore essential that significant amounts of these substances be prevented from entering the environment. This can best be accomplished by proper management of transportation and disposal practices. As indicated previously, Amana Refrigerations's conscientious management of these wastes will greatly reduce the potential for migration of contaminants which will in turn reduce the potential for persistence in the environment.

Also as indicated previously, the leachable quantities of these constituents in the Amana waste are well below the specified EP toxic values. For toluene, the concentration found in the extract from the EP toxic test is substantially less than the recommended ambient limit, above which there would be adverse health and environmental damage.

(v) Potential for Degradation into Non-harmful Constituents.

The three contaminants under consideration (chromium, lead and toluene) will not undergo degradation in the environment.

(vi) Degree of Bioaccumulation in Ecosystems.

As indicated in the above-referenced background document, lead is accumulative, predominately localizing in the bones.

Chromium is a know human carcinogen and relatively low levels adversely effect the health of humans and fish and other aquatic life. At present, however, there is no evidence of accumulation.

Toluene is moderately toxic by ingestion and inhalation. However, it is extensively and rapidly metabolized in the liver. Therefore, bioaccumulation to the point of producing adverse health effects does not appear likely.

(vii) Plausible Types of Improper Management.

The types of improper management techniques that could be practiced are numerous. In view of recent and pending regulations and the penalties imposed, any form of mismanagement which would result in know harm to humans or the environment is no longer logical, even if plausible. Amana Refrigeration recognizes the potential problems that can result if such wastes are mismanaged. As a result it has, in the past, adhered strictly to all regulations governing the storage, transportation and disposal of all wastes it generates.

These high standards of waste management will not be relaxed if these wastes are delisted. Rather, these standards will be maintained and, whenever possible, improved to ensure compliance with all applicable State and Federal regulations.

Specifically, these wastes will be stored in approved containers in a secured storage area. Transportation will be accomplished only by transporters who have the ability to safely transport such wastes and who are EPA listed transporters. Finally, disposal will be in full compliance with Special Waste Authorization Regulations as imposed by the Iowa Department of Environmental Quality.

(viii) Quantities of Waste Generated.

The quantities of waste generated at the Amana Refrigeration, Inc. facility are:

Paint waste (F017)	206 tons/year
Paint Waste Treatment Sludge (Booth)(F018)	99 tons/year
Paint Waste Treatment Sludge (Anolyte/Permeate)(F018)	22 tons/year

(ix) Nature and Severity of Human Health and Environmental Damage That Has Occurred As A Result of Improper Management.

Chromium and lead are identified as human carcinogens. In addition, chromium and toluene produce adverse health effects when inhaled. All three constituents adversely affect human health when ingested. In addition, all three appear to have significant adverse affects on aquatic organisms. For these reasons, strict management of wastes containing significant leachable amounts of these constituents must be practiced.

Again it is emphasized that the leachable concentrations of these constituents in the Amana waste are well below the values established for EP toxicity. In addition, the waste management techniques practiced by Amana Refrigeration greatly reduce the potential for migration and persistence in the environment. As a result no significant damage to human health or the environment is anticipated if the wastes under consideration in this Petition are delisted.

(x) Other Governmental Regulatory Action.

The Iowa Department of Environmental Quality presently has a program governing the disposal of all waste. This program is conducted in conjunction with applicable regulations that may be imposed by the local disposing authority.

Specifically, wastes proposed for disposal are scrutinized by both the State and local agencies with consideration given to the quantity of waste, hazardous or toxic constituents, leachable quantities of these constituents and planned disposal methods and procedures and the disposal site itself.

Permits in the form of Special Waste Authorization are issued only for wastes determined to be acceptable for disposal. Authorization is normally for a one year period and the waste is reconsidered before a renewal for disposal is issued.

Finally, records are maintained by the generator, transporter, disposer and the State to ensure compliance with the Special Waste Authorization.

In the past Amana Refrigeration, Inc. has been disposing of paint waste and paint waste treatment sludge in compliance with this program. Following delisting, disposal of these wastes will again be accomplished in this manner.

(8) Description of Sampling Techniques.

As indicated previously samples of the paint booth waste were obtained as composites to ensure adequate representation of the waste. This was accomplished by first cleaning the paint booth holding tanks in the normal fashion. Floating paint solids were skimmed from the tanks and placed in separate containers. Following removal of the liquid portion of the waste (which is segregated from treatment) samples of the bottom sludge or settleable solids were obtained using a sludge core sampler. The sludge samples were composited with the skimmings in proportion to the amounts of materials removed from each paint booth holding tank.

As indicated previously, the liquid portion of the paint booth waste and the anolyte/permeate waste are batch treated on an individual basis. Composite samples of each of the resulting waste treatment sludges were obtained using a sludge core sampler.

(9) Description of Sample Handling and Preparation Techniques.

Information relative to the handling and preparation of the waste samples, including techniques used for extraction, containerization and preservation of the samples is given on page 5 - Attachments A, B and C to this Petition.

(10) Description of Tests Performed Including Results.

A complete description of the various tests performed on the wastes, including the results of these tests, is given on pages 1, 2 and 5 of Attachments A, B and C to this Petition.

(11) Names and Model Numbers of Testing Instruments.

The names and model numbers of the instruments used for performing the tests are given on page 5 of the Attachments A, B and C to this Petition.

(12) Certification Statement.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Respectfully submitted,

AMANA REFRIGERATION, INC.

Wayne A. Giddings
Sr. Vice President-Manufacturing
12-22-80

Enclosures

☐ ACKNOWLEDGEMENT SENT

Part A, Permit Process --- Internal Checklist

ID Number IAD000610436 ~~IAD000527678~~ Firm Name Amana Refrigeration, Inc

Refer to Form No:	PHASE ONE Interim Regulatory Requirements	Indicate by your initials: Yes	No	Valid Prmlg Date?
1	T/S/D Facility? (If No, return to respondent.)	✓		
3	Form 1 received?	✓		
1	Form 3 received?	✓		
1 & 3	Postmarked on or before November 19, 1980?	✓		
3	Date of operation entered?	✓		
3	Date of operation on or before November 19, 1980?	✓		
Notif. record	Notifier?	✓		
"	Notified on or before August 18, 1980?	✓		
1	Form 1, XIII B signed?	✓		
3	Form 3, IX B Signed?	✓	✓	

(If all ten items above are initialed in the Yes column, generate Interim Status Acknowledgement and indicate the trigger date here: _____)

PHASE TWO

1	Unsure if regulated or non-regulated?		
3	New facility?		
1 & 3	Core items missing? If Yes, indicate which items:		

Facility name___; location___; mail address___; operator info___;

certification___; process info___; waste info___; owner___; sigs___.

PHASE THREE

1 & 3 Non-core items missing? If Yes, indicate which items:

Maps___; photos___; drawings___; lat/long___.

Other observations and comments:

DATE SENT BACK _____

DATE RETURNED _____

Received Date Stamp

OCT 17 1980

(Stamp forms also)

Please print or type in the unshaded areas only
(fill—in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-R0175

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

F I A D 0 0 5 2 7 7 6 7 8

LABEL ITEMS

- I. EPA I.D. NUMBER
- III. FACILITY NAME
- V. FACILITY MAILING ADDRESS
- VI. FACILITY LOCATION

IA D005277678
AMANA REFRIGERATION, INC.
AMANA, IOWA 52204
MIDDLE, IOWA 52307

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill—in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill—in area(s) below. If the label is complete and correct, you need not complete items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold—faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X	
B. Does or will this facility *(either existing or proposed)* include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)	X		
D. Is this a proposed facility *(other than those described in A or B above)* which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X		
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X	
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	
J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP A M A N A R E F R I G E R A T I O N , I N C .

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 R E T T I G , L E O N A R D CHIEF ENGINEER-CONSTRUCT.	3 1 9 | 6 2 2 | 5 5 1 1

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

3 N / A

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 A M A N A	I A	5 2 2 0 4

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

5 N / A

B. COUNTY NAME

I O W A

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6 M I D D L #	I A	5 2 3 0 7	

OCT 17 1980

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)

A. FIRST	B. SECOND
3632 (specify) Household Refrigerators & Home and Farm Freezers.	3631 (specify) Microwave Ovens
C. THIRD	**D. FOURTH**
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME

AMANA REFRIGERATION, INC.

B. Is the name listed in Item VIII-A also the owner? ☒ YES ☐ NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)

F = FEDERAL; S = STATE; P = PRIVATE; M = PUBLIC (other than federal or state); O = OTHER (specify)

P (specify)

D. PHONE (area code & no.)

319 622 5511

E. STREET OR P.O. BOX

N/A

F. CITY OR TOWN	G. STATE	H. ZIP CODE
AMANA	IA	52204

IX. INDIAN LAND

Is the facility located on Indian lands? ☐ YES ☒ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water): 9 N 48 02 102	**D. PSD** (Air Emissions from Proposed Sources): 9 P N/A
B. UIC (Underground Injection of Fluids): 9 U N/A	**E. OTHER** (specify): 9 (specify) See attached listing of Iowa & Ill. Special Waste Disposal Authorization.
C. RCRA (Hazardous Wastes): 9 R N/A	**E. OTHER** (specify): 9 (specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property bounderies. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

Manufacture of refrigerators, freezers and combination refrigerator-freezers; also manufacture microwave ovens.

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
Wayne A. Giddings Sr. Vice President-Manufacturing	Wayne A Giddings	10/15/80

COMMENTS FOR OFFICIAL USE ONLY

ATTACHMENT TO FORM 3

AMANA REFRIGERATION, INC.

IA D00 52 77678

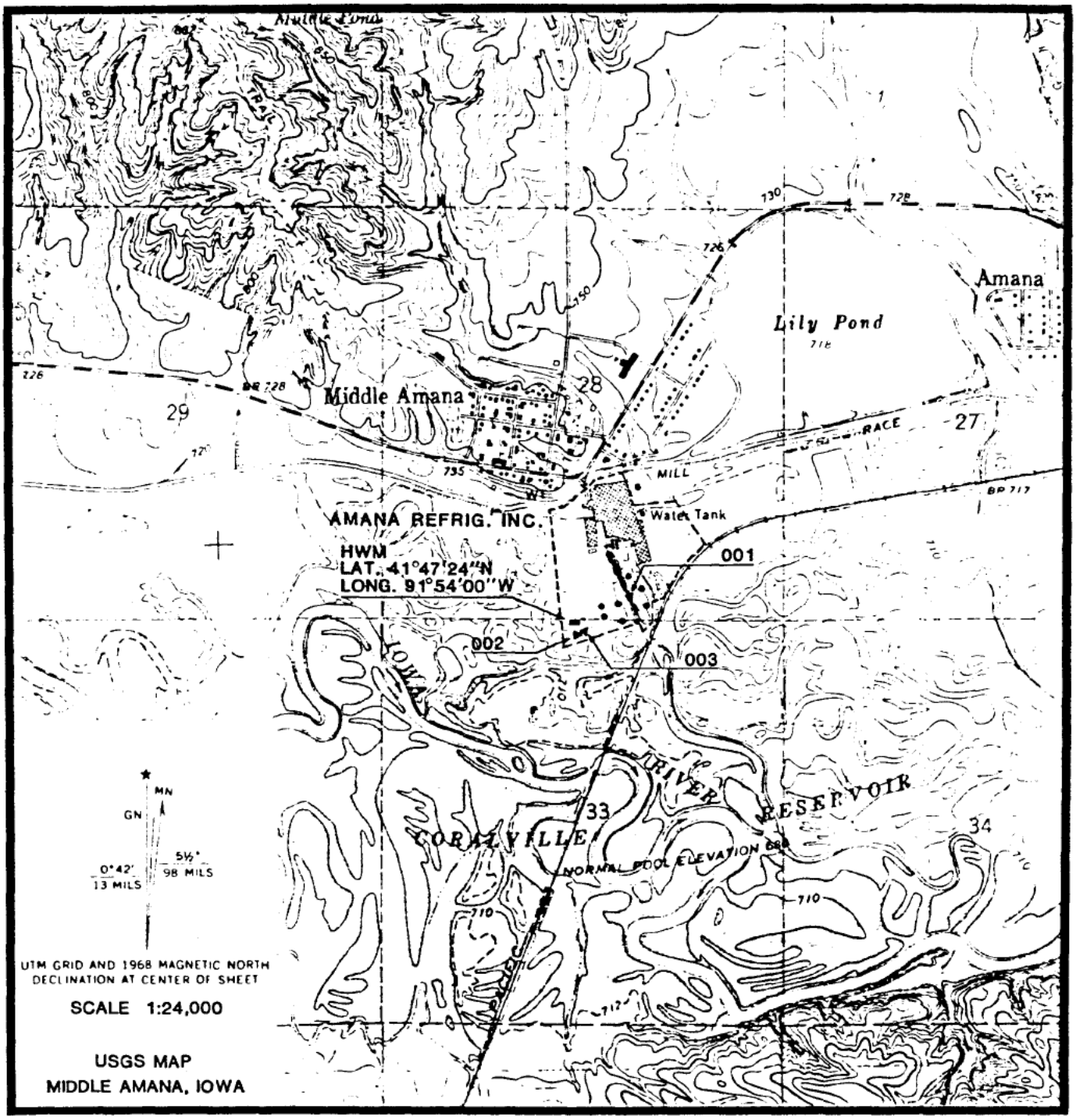
EXISTING PERMITS

ILLINOIS E.P.A.

1. Authorization No. 792312, Generator Code No. 9190950048, Toluene Diisocyanate; expiration date - 10/30/80.
2. Authorization No. 792313, Generator Code No. 9190950048, Polyether Polyol; expiration date - 10/30/80.
3. Authorization No. 793108, Generator Code No. 9190955048, Sodium Hydroxide (Kolene); expiration date - 7/23/81.

IOWA D.E.Q. PERMITS - LANDFILL

1. Parts Washing Sludge, Rolling Machine Waste Cleaner, Liquid Waste and 300 Gal. of Tramp Oil; 6,000 gal. month - Authorization No. 57375043080-1; expiration date - 4/30/81.
2. Phosphatizing Parts Washer Sludge, 4,000 gal. month - Authorization No. 57375043080-2; expiration date - 4/30/81.
3. Paint Spray Booth Sludge and Treatment of Paint Spray Booth, Liquid Waste, 8,000 gal. month - Authorization No. 57375043080-4; expiration date 4/30/81.
4. Parts Washer Rinse, Zinc Phosphate and Chrome (WPS Sludge), 6,000 gal. month - Authorization No. 57375043080-5; expiration date - 4/30/81.
5. Anolyte and Permeate Electro-Dep Sludge, 300 gal. month - Authorization No. 57375043080-6; expiration date - 4/30/81.
6. Electro-Dep. Paint Sludge, 300 gal. month - Authorization No. 57375043080-3; expiration date - 4/30/81.



LEGEND :

------ PROPERTY LINE

● DRINKING WATER WELLS

▲ DISCHARGE STRUCTURES

LOCATION MAP

AMANA REFRIGERATION, INC.

AMANA, IOWA

HOWARD R. GREEN COMPANY
CONSULTING ENGINEERS
4250 GLASS RD. P.O. BOX 9009 • CEDAR RAPIDS, IOWA 52409

AUGUST 1980

Continued from page 2.

NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1): WIADO05277678 T/A C 1

FOR OFFICIAL USE ONLY: W DUP T/A C 2 DUP

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

W A S T E	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	F002	550	T	S01	Sent for recycling.
2	F005		T	S01	Included in Line 1.
3	F005		T	S01	Included in Line 5.
4	F005	80	T	S01	Sent for recycling.
5	F017	206	T	S01	Sent for disposal
6	F018	60	T	T01 S01	Sent for disposal.
7	D002	70	T	S01 T01	Made non-hazardous.
8	U229	186	T	S01	Sent for disposal.
9	U223	186	T	S01	Sent for disposal.
10	U238		T	S01	Included in Line 1.
11	D007	42,800	T	T01	Made non-hazardous.
12	F017	6	T	S01	Sent for disposal.
13	F018	99	T	T01 S01	Sent for disposal.
14	F001	6	T	S01	Sent for recycling.
15	D002	70 (NO LONGER APPLIES)	T	S01	Sent for disposal.
16					
17		PETITIONING FOR DOUBTING WHILE EPA INFORMED OF TEMPORARY SUSPENSION			
18					
19		Leonard Reffig 1/12/81			
20				JV.	
21					
22					
23					
24					
25					
26					

Continued from the front.

IV. DESCRIPTION OF HAZARDOUS WASTES *(continued)*

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

N/A

EPA I.D. NO. *(enter from page 1)*

	F	I	A	D	0	0	5	2	7	7	6	7	8	6
	1	2										13	14	15

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail).*

VI. PHOTOGRAPHS

All existing facilities must include photographs *(aerial or ground–level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail).*

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE *(degrees, minutes, & seconds)*						LONGITUDE *(degrees, minutes, & seconds)*					
4	1	4	7	2	4	9	1	5	4	0	0
65	66	67	68	69	71	72	74	75	76	77	79

VIII. FACILITY OWNER

☐ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*
E: N/A	
15 16 55	56 58 59 61 62 65

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE
F	G		
15 16 42	15 16 49	41 42	47 51

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED
Wayne A. Giddings Sr. Vice President-Manufacturing	Wayne A. Giddings	10-15-80

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED

Please print or type in the unshaded areas only
(fill—in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-S80004

FORM 3 RCRA

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER

F	IA	D0	0	52	7	7	6	7	8			T/A	C	1

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

[X] 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

[ ] 2. NEW FACILITY *(Complete item below.)*

FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

C	YR.	MO.	DAY
8	78	11	08

FOR NEW FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN

YR.	MO.	DAY

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

[ ] 1. FACILITY HAS INTERIM STATUS

[ ] 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES – CODES AND DESIGN CAPACITIES

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C).*

B. PROCESS DESIGN CAPACITY – For each code entered in column A enter the capacity of the process.

1. AMOUNT – Enter the amount.
2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below):* A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

C DUP T/A C 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S02	600	G		5				
X-2	T03	20	E		6				
1	S01	42,900	G		7				
2					8				
3	T01	133,500	U		9				
4					10				

Continued from the front.

III. PROCESSES *(continued)*

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES *(code "T04")*. FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

N/A

IV. DESCRIPTION OF HAZARDOUS WASTES

A. **EPA HAZARDOUS WASTE NUMBER** – Enter the four–digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four–digit number*(s)* from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. **ESTIMATED ANNUAL QUANTITY** – For each **listed waste** entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each **characteristic** or **toxic contaminant** entered in column A estimate the total annual quantity of all the non–listed waste*(s)* that will be handled which possess that characteristic or contaminant.

C. **UNIT OF MEASURE** – For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. **PROCESSES**

1. PROCESS CODES:
   For listed hazardous waste: For each **listed** hazardous waste entered in column A select the code*(s)* from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.
   For non–listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code*(s)* from the list of process codes contained in Item III to indicate **all** the processes that will be used to store, treat, and/or dispose of all the non–listed hazardous wastes that possess that characteristic or toxic contaminant.
   Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code*(s)*.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

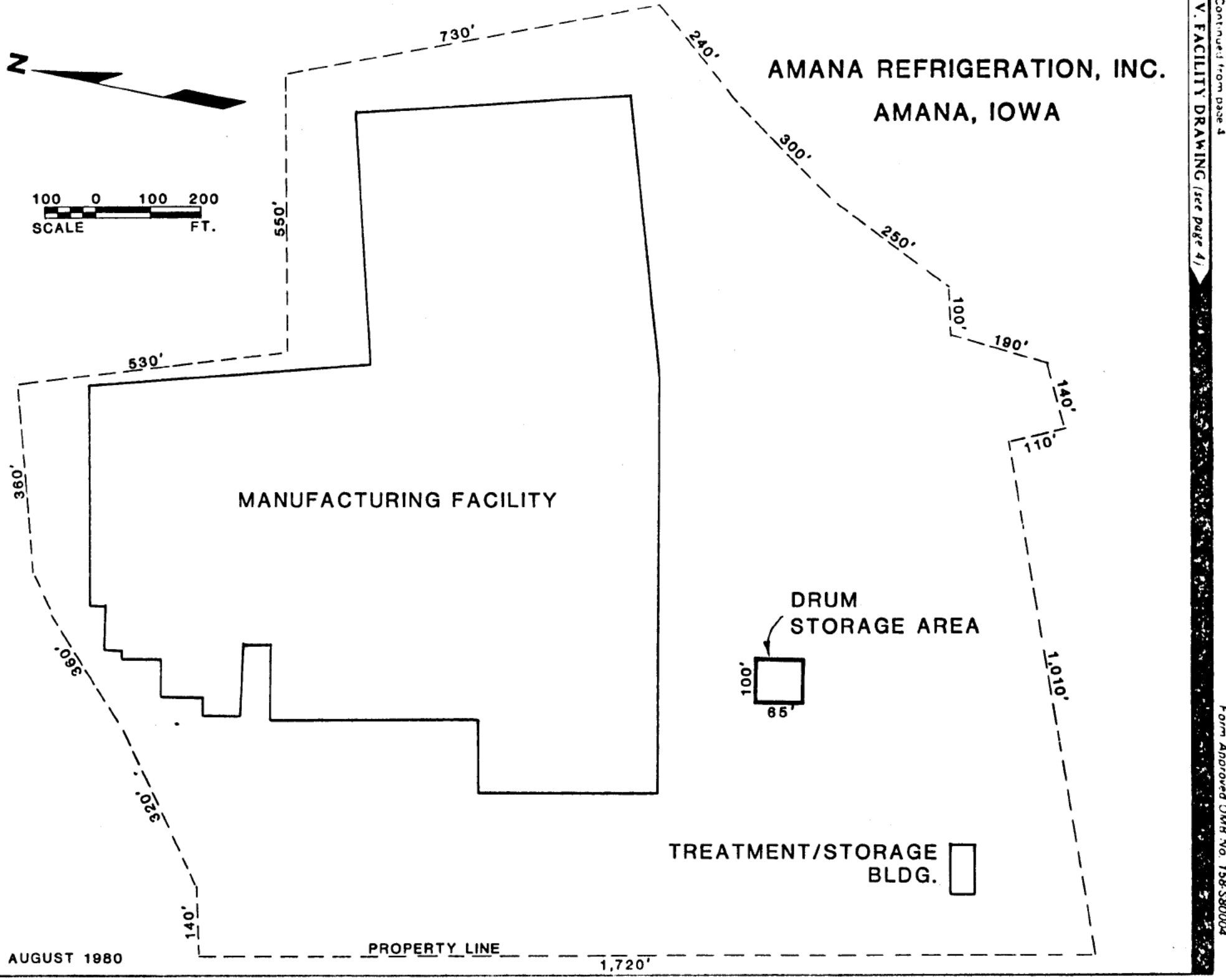
NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER – Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* – A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non–listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				included with above

Continued from page 4



AUGUST 1980

Form Approved OMB No. 158-S80004


ILLEGIBLE
DOCUMENT
2
1

PHOTOGRAPH TAKEN 7-18-80

(1) INDUSTRIAL WASTEWATER TREATMENT BUILDING (EXISTING)

(2) HAZARDOUS WASTE DRUM STORAGE AREA (PROPOSED)

iowa department of environmental quality

reply to: Ronald L. Kolpa
phone: 515/281-8925

SR

Con 12-7-1 HWM FACILITIES
~~CON; 12-7~~ AMANA REFRIG
~~5-44-02-06-04~~ BC
~~CON; 12-2~~ ~~Spills~~

RECORD COPY

File Name ~~5-44-02-06-05~~

Senders Initials RLK

November 21, 1980

Mr. Leonard Rettig
Amana Refrigeration, Inc.
Amana, IA 52204

RE: Contingency Plan

Dear Mr. Rettig:

This letter is to acknowledge receipt of your emergency response plan for hazardous waste treatment and storage areas.

We do, indeed, intend to provide assistance upon request in the event of unplanned release of materials. For your records, I have enclosed a copy of Chapter 41 of our Department rules which is relevant to this subject. You will note that a verbal report is required. You will note, also, that a subsequent written report, although not required, is certainly recommended. These Chapter 41 rules stand separate from Chapter 45 rules specifically addressing hazardous waste management facilities and from EPA's hazardous waste management regulations. While one report to DEQ will satisfy both Chapters 41 and 45 we recommend that you simultaneously copy EPA Region VII on any reports which may be required.

I have forwarded a copy of your November 18th letter and its enclosures to Mr. Jerry Rattenborg of our Regional Office in Manchester, Iowa. It would be his office which would make initial response to any emergency situation at your facility.

Finally, we are forwarding a copy of this letter to EPA Region VII as assurance of your compliance with 265.37a(3) of the May 19, 1980 Federal Register.

If you have any further questions, please don't hesitate to contact us.

Sincerely,

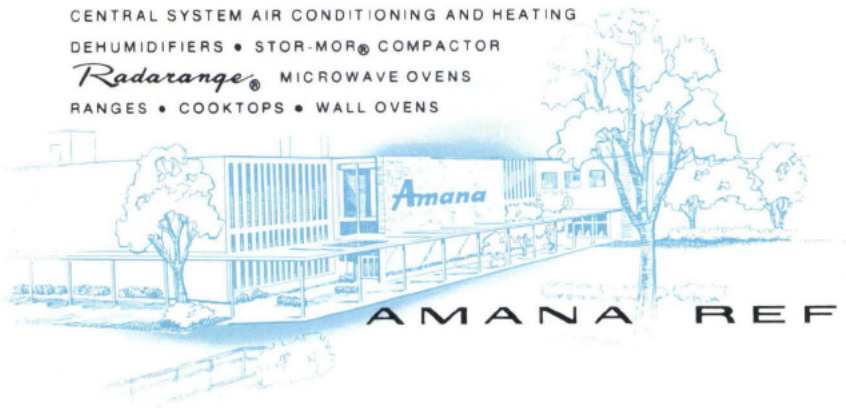
AIR AND LAND QUALITY DIVISION

RLK.

Ronald L. Kolpa, Chief
Hazardous Waste Planning Section

RLK:mjk
Enclosures
cc: Mr. Jerry Rattenborg, Manchester, Iowa
Mr. Robert Morby, EPA Region VII, Kansas City, Missouri

FREEZERS • REFRIGERATOR/FREEZERS • ROOM AIR CONDITIONERS
CENTRAL SYSTEM AIR CONDITIONING AND HEATING
DEHUMIDIFIERS • STOR-MOR® COMPACTOR
Radarange® MICROWAVE OVENS
RANGES • COOKTOPS • WALL OVENS



AMANA REFRIGERATION, INC.

AMANA, IOWA 52204

November 18, 1980

Iowa Department of Environmental Quality
ATTN: Mr. Ron Kolpa
Henry A Wallace Building
Des Moines, Iowa 50319

Dear Mr. Kolpa:

Amana Refrigeration has applied to the U.S. Environmental Protection Agency for a permit to treat and store certain hazardous wastes. In accordance with the requirements of the Federal Resource Conservation and Recovery Act, Amana Refrigeration has prepared a Contingency Plan designed to minimize hazards to human health on the environment as a result of its operations.

Further, this Plan is being submitted for your review in accordance with the requirements of the Code of Federal Regulations, part 265.37. The purpose of this submittal is to familiarize your office with the arrangements contained in the Plan for the safe handling of these materials. In addition, it defines assistance that may be requested of your office in the event that an emergency situation should occur.

Should you not desire to provide the assistance in the Plan, please indicate your intentions in writing to the undersigned.

Sincerely,

AMANA REFRIGERATION, INC.

Leonard Rettig

Leonard Rettig
Chief Engineer of Construction

LR/kj

HAZARDOUS WASTE SPILL & RESPONSE PLAN

Amana Refrigeration, Inc.
Amana, Iowa 52204
319-622-5511

Contact
Leonard Rettig Chief Engineer
Robert Steiff Coordinator

RESPONSE PROCEDURES FOR HAZARDOUS WASTE

For spill or leak contact one of the emergency coordinators in the following order:

1. Robert Steiff
2. Leonard Rettig
3. Fire Chief, Fritz Marz
4. Asst. Chief, Clarence Reihmann
5. Asst. Chief, Arnold Moessner

[redacted] Ex. 6 PII

In case of fire, contact Fire Brigade first then one of the coordinators.

The emergency coordinators, after assessing the problem, will call the following for clean-up.

1. Waste Treatment Personnel
   A. Thomas Hoyer
   B. Bruce Jones
   C. Frank Ollinger
2. Fire Brigade Personnel - All captains (8 people).

[redacted] Ex. 6 PII

All fire and spills emergency folders will be located in the safety equipment house. Copies will be kept at the Personnel Office and Waste Treatment Plant.

Fire equipment needed and proper clean-up procedures needed for each waste:

1. Toluol - Flammable liquid.
   Fire extinguisher needed is ABC dry chemical type.
   Spill clean-up - Large spills - Explosion proof pump. Pump as much liquid into a new drum as possible. Then using floor dry or sawdust, pick-up the remaining liquid and put it in a proper drum for disposal in authorized land-fill site.

2. Foam A side - Toluene Diisocyanate
   Poison B - In case of fire and/or spills, use self contained breathing apparatus at all times also use ABC dry chemical to put out fire. With all spills, use chemically resistant rubber gloves, body and eye protection.

   Clean-up spill by using sawdust and/or floor dry to absorb liquid. Put this absorbed material into a 17H drum and add dilute ammonium hydroxide. Allow this mixture to stand 24 hours then seal the drum and send to hazardous land-fill.

3. 1-1-1- Trichloroethene - Non Flammable
   If spilled, use sawdust and/or floor dry to absorb the spill. Put mixture into 17H drum, seal and send to hazardous landfill.

4. Foam B side Trichlorofluormethane - None Flammable
   For spills use procedures in Number 3.

5. Raw Paints - Flammable liquid
   Use a ABC dry chemical type fire extinguisher. For spills, use sawdust and/or floor dry to absorb liquid. Put this mixture in a 17H drum, seal it and send to hazardous landfill.

6. Treatment plant paint sludge
   Production plant paint sludge..
   Non Flammable
   For spills use procedures as in Number 3.

7. Kolene - Non flammable
   Spills, use shovels and broom, put spilled material into new drums and send to hazardous landfill. Use eye, hand and body protection when cleaning up spills.

8. Foam flush - Methlene Chloride, Non Flammable
   Methol Alcohol
   Trichlorethylene
   Spills use same procedure as Number 3 - also use chemical resistant glove, eye and body protection.

9. Local Fire Department will have all information regarding hazardous waste and their storage areas.

   All other local agencies will be supplied this information as needed.

Emergency equipment available for Amana's hazardous waste storage area.

Amana has an internal communications and alarm system (both voice and signal) consisting of telephones, hand-held two way radios and seperate alarm circuitry system which can be used to implement evacuation procedures in the event of emergencies or disaster.

4 - Fire extinguishers will be at the safety house, each of which will be 15 lbs. capacity - ABC dry chemical type.

2 - Fire extinguishers in weather proof cases attached to storage fence.

1 - Air driven pump will be located at Waste Treatment Plant.

2 - Self contained breathing apparatus which will be stored at safety house.

Approximately 600# of sawdust or floor dry to be stored at safety equipment house.

1 - Eye and safety shower to be located at well house #10 next to safety equipment house.

4 - Sets of chemical resistant gloves, eye, body and foot protection.

2 - Shovels, brooms, mops (spark resistant) and bucket located at safety equipment house.

1 - Fire hose and fire hydrant located north of the hazardous waste storage area.

1 - Mobile fire unit with a 150# ABC dry chemical fire extinguisher.
   2 - 35# foam type extinguisher
   4 - Self contained breathing apparatus
   4 - Length of fire hose

The unit will be stored at the EPS styrofoam area, north end of Bldg. 56.

§ 265.56 Emergency procedures.

(a) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) must immediately:

(1) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and

(2) Notify appropriate State or local agencies with designated response roles if their help is needed.

(b) Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and a real extent of any released materials. He may do this by observation or review of facility records or manifests and, if necessary, by chemical analysis.

(c) Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-offs from water or chemical agents used to control fire and heat-induced explosions).

(d) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, he must report his findings as follows:

(1) If his assessment indicates that evacuation of local areas may be advisable, he must immediately notify appropriate local authorities. He must be available to help appropriate officials decide whether local areas should be evacuated; and

(2) He must immediately notify either the government official designated as the on-scene coordinator for that geographical area (in the applicable regional contingency plan under Part 1510 of this Title), or the National Response Center (using their 24-hour toll free number 800/424-8802). The report must include:

(i) Name and telephone number of reporter;

(ii) Name and address of facility;

(iii) Time and type of incident (e.g. release, fire);

(iv) Name and quantity of material involved, to the extent known;

(v) The extent of injuries, if any; a

(vi) The possible hazards to huma health, or the environment, outside t facility.

(e) During an emergency, the emergency coordinator must take all reasonable measures necessary to

releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.

(f) If the facility stops operations in response to a fire, explosion or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

(g) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.

[*Comment:* Unless the owner or operator can demonstrate, in accordance with § 261.3(c) or (d) of this Chapter, that the recovered material is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of Parts 262, 263, and 265 of this Chapter.]

(h) The emergency coordinator must ensure that, in the affected area(s) of the facility:

(1) No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and

(2) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

(i) The owner or operator must notify the Regional Administrator, and appropriate State and local authorities, that the facility is in compliance with paragraph (h) of this Section before operations are resumed in the affected area(s) of the facility.

(j) The owner or operator must note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, he must submit a written report on the incident to the Regional Administrator. The report must include:

(1) Name, address, and telephone number of the owner or operator;

(2) Name, address, and telephone number of the facility;

(3) Date, time, and type of incident (e.g., fire, explosion);

(4) Name and quantity of material(s) involved;

(5) The extent of injuries, if any;

(6) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and

(7) Estimated quantity and disposition of recovered material that resulted from the incident.

ARRANGEMENTS WITH LOCAL AUTHORITIES

In the event of an emergency, the emergency coordinator will assess possible hazards to human health or the environment. If necessary, particularly when the corrdinator determines that there is a threat to human health outside of Amana Refrigeration, he will notify the appropriate local authorities and request specific assistance. Those persons or agencies who may be called on to provide assistance are:

Iowa County Sheriff
Amana Fire District
Amana Clinic
Amana Refrigeration Construction Dept.
Iowa Department Environmental Quality

Evacuation procedures:
If the emergency coordinator determines that evacuation is advisable, procedures currectly on file with the plant safety director will be implemented. These procedures will involve those persons or agencies outside of Amana Refrigeration, as appropriate.

This plan will be implemented in accordance with 40 CFR, part 265.56, attached.

ILLEGIBLE
DOCUMENT

1. Industrial Waste Water Treatment Building
2. Hazardous Waste Drum Storage Area.
3. Hazardous Waste Safety Equipment Storage House.

WEEKLY INSPECTION OF HAZARDOUS WASTE
STORAGE AREA DATE_____

WASTE NAME	NO. OF DRUMS IN STORAGE	NO. OF DRUMS LEAKING	NO. OF DRUMS DAMAGED AND DETERIORATED DRUMS	CORRECTION MADE IF LEAKING OR DETERIORATION IS NOTED

OBSERVATIONS OF HAZARDOUS STORAGE AREA

INSPECTED BY

HAZARDOUS SUBSTANCES EMERGENCY ACTION CHART

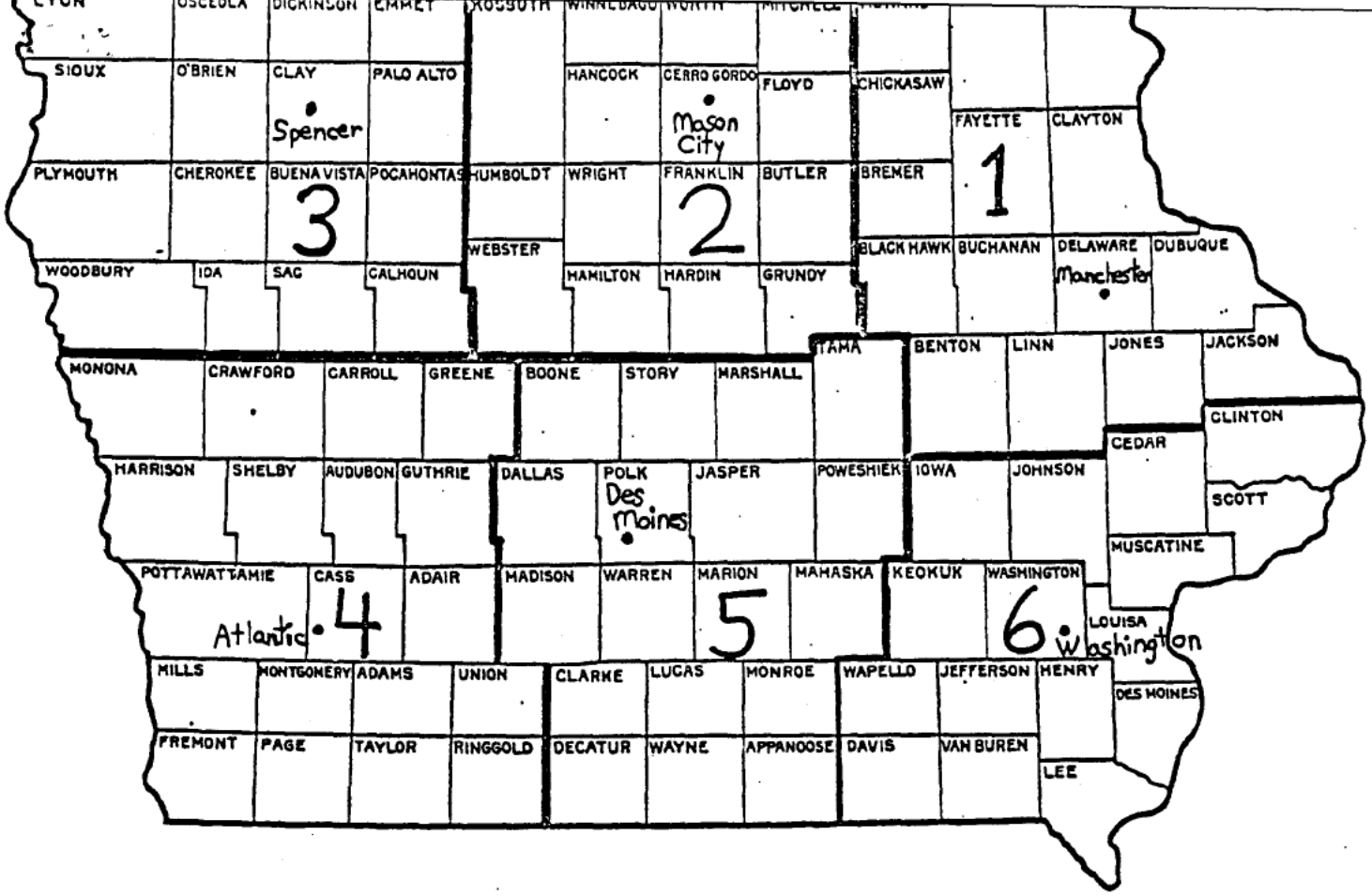
IN CASE OF TRANSPORTATION ACCIDENT INVOLVING THE FOLLOWING:		FOR INFORMATION CALL:	FOR ON-SITE ASSISTANCE CALL:	REQUIRED NOTIFICATION **
CHEMICALS (INCLUDING ALL PETROLEUM PRODUCTS)	RAIL	1 2 7 9 11 16	1 5 7 9 12	7
	TRUCK	2 7 9 11 16	5 7 9 12	7
	AIR	2 7 9 11 16	5 7 9 12	7
	WATER	2 7 9 11 16	5 7 9 12	7
COMPRESSED GASES	RAIL	1 2 7 9 11 16	1 5 7 9	7
	TRUCK	2 7 9 11 16	5 7 9	7
	WATER	2 7 9 11 16	5 7 9 12	7
CORROSIVE LIQUIDS	RAIL	1 2 7 11 16	1 5 7	7
	TRUCK	2 7 11 16	5 7	7
	WATER	2 7 11 16	5 7 12	7
EXPLOSIVES CLASS A & CLASS B	RAIL	1 7 9 11 16	1 5 7 8 9	7
	TRUCK	7 8 9 11 16	5 7 8 9	7
	WATER	7 9 11 16	5 7 8 9	7
FLAMMABLE AND COMBUSTIBLE LIQUIDS	RAIL	1 2 7 9 11 16	1 5 7 9	7
	TRUCK	2 7 9 11 16	5 7 9	7
	WATER	2 7 9 11 16	5 7 9 12	7
OXIDIZING MATERIALS	RAIL	2 7 11 16	1 5 7	7
	TRUCK	2 7 11 16	5 7	7
	WATER	2 7 11 16	5 7 12	7
AGRICULTURAL CHEMICALS: PESTICIDES, HERBICIDES, FERTILIZERS	RAIL	2 7 11 13 14 15 16	5 7 12 13 14 15	7
	TRUCK	2 7 11 13 14 15 16	5 7 12 13 14 15	7
	WATER	2 7 11 13 14 15 16	5 7 12 13 14 15	7
POISONS	RAIL	2 7 11 13 14 16	1 5 7	7
	TRUCK	2 7 11 13 14 16	5 7	7
	AIR	2 7 11 13 14 16	5 7	7
	WATER	2 7 11 13 14 16	5 7 12	7
RADIOACTIVE MATERIALS	RAIL	1 3 7 11 16	3 5 7	7
	TRUCK	3 7 11 16	3 5 7	7
	AIR	3 7 11 16	3 5 7	7
FLAMMABLE SOLIDS	RAIL	1 2 7 11 16	1 5 7	7
	TRUCK	2 7 11 16	5 7	7
	AIR	2 7 11 16	5 7	7
	WATER	2 7 11 16	5 7 12	7
RADIATION OR TOXIC MATERIAL EXPOSURE		7 16	3 5 7	7
CONTAMINATION OF WATERWAYS OR WATERSHED		7 10 12 16	5 7 10 12	7
UNIDENTIFIED HAZARDOUS SUBSTANCE		2 7 16	5 7	7
LIVESTOCK TOXICITY INCIDENTS		6 7 15 16	5 7 15	15

AGENCIES, FEDERAL, STATE, AND LOCAL, WHO CAN PROVIDE INFORMATION, ASSISTANCE, OR HAVE A NEED TO KNOW. THEY ARE KEYED AS FOLLOWS:

1. Bureau of Explosives, Assoc. of American Railroads..... 202-293-4048
2. CHEMTREC-National Agricultural Chemicals Assoc., Washington, D.C. 800-424-9300
3. Department of Energy, Chicago Operations Office.....(Duty hours) 312-972-4800
   (Off-duty hours) 312-972-5731
4. Co./Mun. Disaster Services/Sheriff's Department..... (24 hours)
5. Local Police or Fire Department.....
6. **Iowa Office of Disaster Services (notify only if 7 not notified) (24 hours) *515-281-3231
7. Iowa Department of Environmental Quality..... (24 hours) 515-281-8694
8. 543rd Ordnance Detachment (EOD Control)..... (24 hours) 314-363-6145
9. State Fire Marshal, Department of Public Safety.....(Duty hours) 515-281-5821
   (24 hours) 515-281-3561
10. Conservation Commission.....(Duty hours) 515-281-5384 -5385
    (Non-duty hours) 515-281-3231
11. U. S. Department of Transportation..... 202-426-1830
12. U. S. Environmental Protection Agency..... (24 hours) 816-374-3778
13. Poison Control Center, Iowa Methodist Hospital..... (24 hours) 515-283-6212
14. Poison Control Center, University of Iowa Hospitals & Clinics.. (24 hours) 800-272-6477
15. State Department of Agriculture.....(Duty hours) 515-281-5321
    (Non-duty hours) 515-281-3231
16. Motor Vehicles Div.,State Dept. of Transportation.....(Normal work day) 515-281-3047
    (24 hours) 515-281-5827

NOTES: 1. State agencies will notify their Federal counterparts.
2. Shippers and carriers must meet Federal notification requirements.
3. *Dept. of Public Safety Telecommunications systems can also be used, such as radio and the ICWA system.

Office of Disaster Services
(Revised 3/1/79)



REGION	WORK HOURS TELEPHONE	EMERGENCY AFTER HOURS COMMUNICATIONS	
1-MANCHESTER	319/927-2640	319/927-3355	MANCHESTER POLICE
2-MASON CITY	515/424-4073	515/421-3000	CERRO GORDO CO. SHERIFF
3-SPENCER	712/262-4177	712/262-3221	CLAY CO. SHERIFF
4-ATLANTIC	712/243-1934	712/243-3512	ATLANTIC POLICE
5-DES MOINES	515/281-3622	515/281-8694	IOWA PUBLIC SAFETY -- PAGER 195
6-WASHINGTON	319/653-2135	319/653-2107	WASHINGTON CO. PUBLIC SAFETY
CENTRAL OFFICE	515/281-8694	515/281-8694	PAGER 185

COUNTIES BY REGION

(1)	Adair	4
(2)	Adams	4
(3)	Alamakee	1
(4)	Appanoose	5
(5)	Audubon	4
(6)	Benton	1
(7)	Black Hawk	1
(8)	Boone	5
(9)	Bremer	1
(10)	Buchanan	1
(11)	Buena Vista	3
(12)	Butler	2
(13)	Calhoun	3
(14)	Carroll	4
(15)	Cass	4
(16)	Cedar	6
(17)	Cerro Gordo	2
(18)	Cherokee	3
(19)	Chickasaw	1
(20)	Clarke	5
(21)	Clay	3
(22)	Clayton	1
(23)	Clinton	6
(24)	Crawford	4
(25)	Dallas	5
(26)	Davis	6
(27)	Decatur	5
(28)	Delaware	1
(29)	Des Moines	6
(30)	Dickinson	3
(31)	Dubuque	1
(32)	Emmet	3
(33)	Fayette	1
(34)	Floyd	2
(35)	Franklin	2
(36)	Fremont	4
(37)	Greene	4
(38)	Grundy	2
(39)	Guthrie	4
(40)	Hamilton	2
(41)	Hancock	2
(42)	Hardin	2
(43)	Harrison	4
(44)	Henry	6
(45)	Howard	1
(46)	Humboldt	2
(47)	Ida	3
(48)	Iowa	6
(49)	Jackson	1
(50)	Jasper	5
(51)	Jefferson	6
(52)	Johnson	6
(53)	Jones	1
(54)	Keokuk	6
(55)	Kossuth	2
(56)	Lee	6
(57)	Linn	1
(58)	Louisa	6
(59)	Lucas	5
(60)	Lyon	3
(61)	Madison	5
(62)	Mahaska	5
(63)	Marion	5
(64)	Marshall	5
(65)	Mills	4
(66)	Mitchell	2
(67)	Monona	4
(68)	Monroe	5
(69)	Montgomery	4
(70)	Muscatine	6
(71)	O'Brien	3
(72)	Osceola	3
(73)	Page	4
(74)	Palo Alto	3
(75)	Plymouth	3
(76)	Pocahontas	3
(77)	Polk	5
(78)	Pottawattamie	4
(79)	Poweshiek	5
(80)	Ringgold	4
(81)	Sac	3
(82)	Scott	6
(83)	Shelby	4
(84)	Sioux	3
(85)	Story	5
(86)	Tama	5
(87)	Taylor	4
(88)	Union	4
(89)	Van Buren	6
(90)	Wapello	6
(91)	Warren	5
(92)	Washington	6
(93)	Wayne	5
(94)	Webster	2
(95)	Winnebago	2
(96)	Winneshiek	1
(97)	Woodbury	3
(98)	Worth	2
(99)	Wright	2

iowa department of environmental quality

reply to: Ronald L. Kolpa
phone: 515/281-8924

December 1, 1980

RECORD COPY
File Name S-44-02-06-05
Senders Initials RLK

Mr. Leonard Rettig
Amana Refrigeration, Inc.
Amana, IA 52204

RE: Contingency Plan

Dear Mr. Rettig:

On November 21, 1980, I had written to you acknowledging receipt of your hazardous waste facility's contingency plan. I had indicated that our Region 1 office of Manchester, Iowa, would be the respondent in the event of an emergency. A copy of your plan was forwarded to Jerry Rattenborg of that regional office.

I was wrong. The Amana facility, located in Iowa County, is in our Region 6. Consequently, I have asked Mr. Rattenborg to forward your contingency plan to Mr. Earl Voelker, his counterpart in our Washington, Iowa office.

I apologize for any confusion and inconvenience.

Sincerely,

AIR AND LAND QUALITY DIVISION

RLK

Ronald L. Kolpa, Chief
Hazardous Waste Planning Section

RLK:mjk

cc: Mr. Jerry Rattenborg, DEQ Regional Office No. 1 - Manchester, Iowa
Mr. Earl Voelker, DEQ Regional Office No. 6 - Washington, Iowa
Mr. Robert Morby, EPA VII - Kansas City, Missouri

Print or type in the unshaded areas only.
(Shaded areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-S80004

FORM 3 RCRA

U.S. ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER: F IA D0 0 52 7 7 6 7 8 — 1 — 1-13-83 MH7.

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

- [X] 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*
- [ ] 2. NEW FACILITY *(Complete item below.)*

FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*: YR. 78 | MO. 11 | DAY 08

FOR NEW FACILITIES, PROVIDE THE DATE *(yr., mo., & day)* OPERATION BEGAN OR IS EXPECTED TO BEGIN: YR. | MO. | DAY

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

- [ ] 1. FACILITY HAS INTERIM STATUS
- [ ] 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES – CODES AND DESIGN CAPACITIES

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C)*.

B. PROCESS DESIGN CAPACITY – For each code entered in column A enter the capacity of the process.

1. AMOUNT – Enter the amount.
2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G	LITERS PER DAY	V	ACRE-FEET	A
LITERS	L	TONS PER HOUR	D	HECTARE-METER	F
CUBIC YARDS	Y	METRIC TONS PER HOUR	W	ACRES	B
CUBIC METERS	C	GALLONS PER HOUR	E	HECTARES	Q
GALLONS PER DAY	U	LITERS PER HOUR	H		

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below)*: A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

C DUP T/A C 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S02	600	G		5				
X-2	T03	20	E		6				
1	~~S01~~	~~42,900~~ 1-13-83 MH7	~~G~~		7				
2					8				
3	~~T01~~	~~133,500~~ 1-13-83 MH7.	~~U~~		9				
4					10				

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

N/A

IV. DESCRIPTION OF HAZARDOUS WASTES

A. EPA HAZARDOUS WASTE NUMBER — Enter the four–digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four–digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY — For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non–listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE — For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:
   For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.
   For non–listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non–listed hazardous wastes that possess that characteristic or toxic contaminant.
   Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER — Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV (shown in line numbers X-1, X-2, X-3, and X-4 below) — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non–listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				included with above

CONTINUE ON PAGE 3

ntinued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list. 1-13-83 MH7

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1): I A D 0 0 5 2 7 7 6 7 8 — T/A C: 1

FOR OFFICIAL USE ONLY: W DUP — T/A C: 2 DUP

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)				D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	~~F002~~	~~550~~	~~T~~	~~S01~~				~~Sent for recycling.~~
2	~~F005~~		~~T~~	~~S01~~				~~Included in Line 1.~~
3	~~F005~~		~~T~~	~~S01~~				~~Included in Line 5.~~
4	~~F005~~	~~80~~	~~T~~	~~S01~~				~~Sent for recycling.~~
5	~~F017~~	~~206~~	~~T~~	~~S01~~				~~Sent for disposal~~
6	~~F018~~	~~60~~	~~T~~	~~T01~~	~~S01~~			~~Sent for disposal.~~
7	~~D002~~	~~70~~	~~T~~	~~S01~~	~~T01~~			~~Made non hazardous.~~ 1-13-83 MH7
8	~~U229~~	~~186~~	~~T~~	~~S01~~				~~Sent for disposal.~~
9	~~U223~~	~~186~~	~~T~~	~~S01~~				~~Sent for disposal.~~
10	~~U238~~		~~T~~	~~S01~~				~~Included in Line 1.~~
11	~~D007~~	~~42,800~~	~~T~~	~~T01~~				~~Made non-hazardous.~~
12	~~F017~~	~~6~~	~~T~~	~~S01~~				~~Sent for disposal.~~
13	~~F018~~	~~99~~	~~T~~	~~T01~~	~~S01~~			~~Sent for disposal.~~
14	~~F001~~	~~6~~	~~T~~	~~S01~~				~~Sent for recycling.~~
15	~~D002~~	~~70~~	~~T~~	~~S01~~				~~Sent for disposal.~~
16								
17		See attached Industrial Waste Listing,						
18		Amana Refrigeration, Inc, Amana, Iowa,						
19		November, 1982; Revised January, 1983.						
20								
21								
22								
23								
24								
25								
26								

EPA Form 3510-3 (6-80)

CONTINUE ON REVERSE

ntinued from the front.

. DESCRIPTION OF HAZARDOUS WASTE. *ntinued)*

. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

N/A

EPA I.D. NO. *(enter from page 1)* 1-13-83

													F/A	C
I	A	D	0	0	5	2	7	7	6	7	8			6

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail).*

VI. PHOTOGRAPHS

All existing facilities must include photographs *(aerial or ground—level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail).*

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*
41 47 24	91 54 00

VIII. FACILITY OWNER

☒ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*
N/A	

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE
	G		

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED
Wayne A. Giddings Sr. Vice President-Manufacturing	Wayne A Giddings	10-15-80

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED

INDUSTRIAL WASTE LISTING
AMANA REFRIGERATION, INC.
AMANA, IOWA
NOVEMBER, 1982

REVISED JANUARY, 1983

TOLUENE

Toluene is a listed waste from non-specific sources, No. F005 (I) (T), as indicated in 40 CFR 261.31.

This waste is generated from the cleaning and flushing of our (acrylic paint) painting operations; in 1982 we generated from January through October, 225 55-gallon drums, which is accumulated in our hazardous waste storage area, to approximately 75 drums or less than 90 days, whichever occurs first. It is then shipped out for recycling. Anticipated quantity to be generated in 1983 is 310 drums.

Toluene is being recycled at Waste Research & Reclamation Company, Inc., Eau Claire, Wisconsin.

This waste was listed as an F005 on our notification form 8700-12 of 7/30/80, and will appear as an F005 on our subsequent notification of January 1983.

RAW PAINT

Raw paint is not a listed waste. Raw paint is an ignitable waste under 40 CFR 261.21 and carries the number D001.

Raw paint waste is only generated from an accidental leak, spill or contamination of the raw product. The amount generated is very minimal; in 1981 to October 1982, none was generated.

Raw paint, if generated, can be disposed of at SCA Chemical Services, Chicago, Illinois, or at Waste Research & Reclamation Company, Inc., Eau Claire, Wisconsin, within 90 days of a request.

This waste was listed as an F017 on our notification form 8700-12 of 7/30/80. As F017, was removed from the Hazardous List, Federal Register, January 16, 1981, and now falls under D001, as it will appear on our subsequent notification of January 1983.

ELECTRO-DEPOSITION OF PAINT

Electro-deposition painting generates a number of wastes in the process. Waste is generated from filter cleaning and tank maintenance.

Electro-deposition paint is a composition of three basic parts: Vehicle, Paste, D.I. Water. The waste solution is treated with caustic soda to a P.H. of 12. This separates the suspended solids from the liquid. Then then leaves a firm, rubber-like waste sludge. The liquid parts is decanted and treated with sulfuric acid, sodiumsulfide and polyelectrolite. This precipates the dissolved metals. This sludge is then disposed of under S.W.A. Permit No. 5703032582-6. The liquid decant is discharged under N.P.D.E.S. Permit No. 48-02-01-02, outfall No. 002.

The removed rubbery solid waste was formerly a listed waste, No. F018, now a non-existing number; from 1980 through the present time we have generated 20 55-gallon drums. The anticipated rate of generation for 1983 is 8 drums.

We have tested this waste for EP toxicity to show that it can be excluded under 40 C.F.R. 261.3 (d) (1).

Disposal of this waste will be in accordance with the SWA presently being applied for.

The untreated waste was listed as an F018 on our notification form 8700-12 of 7/30/80 and is listed on our subsequent notification of January 1983 as a toxic waste.

ANOLYTE AND PERMEATE

Also generated by the electro-deposition painting process, the anolyte is removed by a membrane filtering system removing a clear, acidic liquid build-up from the unit. This is mixed with the permeate before treatment.

The permeate is generated from an ultra-filter (membrane type) removing the surplus liquid generated from D.I. water rinsing of the painted parts. The resulting mixture is then batch-treated with sodium sulfide and polyelectrolite to precipitate the heavy metals. The liquor is then decanted and discharged in outfall 002 N.P.D.E.S. Permit No. 48-02-01-02. The resulting sludge under S.W.A. Permit No. 5703032582-6 is disposed of in a landfill.

Of the above mixture we generate approximately 4,000 gallons a month resulting in approximately four gallons of sludge per month. In addition, one product is used to clean the ultra-filter approximately four times a year. "Additive Z" is used as a cleaning agent

for the filter membrane. This generates approximately 450 gallons per cleaning. This is treated with alum, sulfuric acid, sodium-sulfite and polyelectrolite. The resultant liquid is decnated and discharged in outfall No. 002 N.P.D.E.S. Permit No. 48-02-01-02. The resulting sludge, approximately 20 gallons, is disposed of in a landfill as S.W.A. Permit No. 5703032582-6. As with the previous waste, this is also excluded under 40 C.F.R. 122.21 (d) (2) (IV) (V) and 40 C.F.R. 261.4 (a) (2).

These wastes were listed as F018 on our notification form 8700-12 of 7/30/80. No. F018 is a non-existing number as of January 16, 1981. Therefore, the untreated wastes will be listed on our subsequent notification of January 1983 as a toxic waste. They are exempt from further permitting requirements by 40 C.F.R. 122.21 (d) (2) (IV) (V) and 40 C.F.R. 261.4 (a) (2) as a hazardous waste.

1-1-1 TRICHLOROETHANE

This waste is generated from the hand-wiping of small metal parts; January - October, of 1982, 150 gallons were generated. This is stored in the hazardous waste storage area for no more than 90 days at which time it is shipped for recycling. The anticipated amount to be generated in 1983 is 210 gallons.

This waste is being recycled at Waste Research & Reclamation Company, Inc., Eau Claire, Wisconsin.

This waste was listed as an F001 on our notification form 8700-12 of 7/30/80 and will appear as an F002 on our subsequent notification of January 1983.

WASTES FROM URETHANE-FOAMING OPERATION, TOLUENE DIISOCYONATE (PART A), POLYETHERPOLYOL (PART B).

TOLUENE DIISOCYONATE (PART A).

This is used as Part A of a urethane foam insulation process; also used in this process is Part B, Polyetherpolyol.

The waste generated from this operation results from minor contamination of moisture or small spills such as a leaking seal on a pump, cleaning of a filter, etc. The two wastes are kept segregated from each other, therefore, leaving a waste much like the raw product received from the vendor.

Toluene Diisocyonate Part A is a listed waste, No. U223 (T), 40 C.F.R. 261.3 (a) (2) (ii). The Toluene Diisocyonate was listed as a U223 on our notification form 8700-12 of 7/30/80. This waste will remain a U223 on our subsequent notification of January 1983. This waste will be disposed of by SCA Chemical Services, Chicago, Illinois or Commercial Pumpers & Incineration, Highland, Indiana.

Stored for no more than 90 days, the estimated quantity to be generated in 1983 is 16 drums.

POLYETHER POLYOL (PART B)

This is a hazardous waste as per 40 C.F.R. 261.3 (b) (3) and falls under D003 for reactivity.

This waste was listed as a U229 on our notification form 8700-12 of 7/30/80. The waste, No. U229, is now a non-existing number therefore it will be listed as a D003 on our subsequent notification of January 1983.

We have generated 6 55-gallon drums from January through October, 1982. This waste will be stored in our hazardous waste storage area, where it will be accumulated for no more than 90 days. The estimated quantity to be generated in 1983 is 9 drums. This waste will be disposed of by SCA Chemical Services, Chicago, Illinois, or Commercial Pumpers & Incineration, Highland, Indiana, or Chemical Waste Management, Inc., Calumet City, Illinois.

METHYLENE CHLORIDE

This waste is generated from the urethane foam insulation operation. It is used to flush or clean the application equipment. Small quantities of Methanol and Urethane foam are mixed with the Methylene Chloride in the above operation. From January through October, 1982, we generated 15 55-gallon drums. This waste will be stored in our hazardous waste storage area. It is accumulated no more than 90 days, at which time it is sent for recycling. The estimated quantity generated for 1983 is 21 drums.

This waste is being recycled at McKesson Envirosystems, Fort Wayne, Indiana.

This waste was listed as an F002, F005, U238 on our notification form 8700-12 of 7/30/80. On November 11, 1980, methanol was changed from F005 to an F003, at which time we amended page 3 of form 3510-3 to show the change.

Urethane foam as U238 no longer exists as per 40 C.F.R. 261.33 (f) therefore the waste will be listed as F002 and F003 on our subsequent notification form 8700-12 of January 1983.

SODIUM HYDROXIDE (KOLENE SALT)

This waste is generated from our paint stripping operation. We generate approximately 4,000 lbs. a month. This waste is batch-treated by dissolving the Sodium Hydroxide in water. This results in a liquor with a pH of 13.5 and approximately 10% suspended solids.

After settling, the liquor is decanted and used as a caustic solution to raise the pH of the Chromium and Zinc waste treating system and becomes part of our Outfall No. 003 N.P.D.E.S. Permit No. 48-02-01-02. The solids part of the waste are used to raise the pH of the batch treatment of our paint booth waste and becomes part of our S.W.A. Permit No. 5703032582-6. The above procedure renders the Sodium Hydroxide (Kolene Salt) waste non-hazardous, in accordance with 40 C.F.R. 122.21 (d) (2) (vi) and 40 C.F.R. 264.1 (g) (6).

This waste was listed as a D002 on our notification form 8700-12 of 7/30/82 and will remain on our subsequent notification of January 1983 only because we generate this waste.

HEXAVALENT CHROMIUM RINSE

Hexavalent Chromium is generated in our parts washer prior to our painting operation. It is used as a recirculated rinse following a zinc phosphatizing process. In addition, this is followed by a D.I. water recirculated rinse and a final rinse of D.I. water. This rinse overflows the recirculated rinse tank which contains Chromium VI. This then is pumped into an underground

5,000 gallonn equalization tank, complete with inspection access manhole, then pumped into a treatment tank where Sodium Bisulfite and Sulfuric Acid are added to reduce the Hexavalent Chromium to Trivalent Chromium. This then gravity-flows into a two-stage pH adjustment system, adjusting final pH to 9.5. Ferrous Sulfate is also added in this process. The effluent then gravity-flows into two (2) membrane filtering systems, removing the suspended solids from the liquor. The clear effluent is then discharged into Outfall 003 N.P.D.E.S. Permit No. 48-02-01-02. The remaining solids are then pumped into a centrifuge. The resulting centrate is recirculated into the pH adjustment tanks. The remaining sludge out of the centrifuge is then processed by a vacuum filter and is disposed of in a landfill under S.W.A. Permit No. 5703032582-6. We generate approximately 9,000 gallons of Chromium rinse a day. The above process renders this waste non-hazardous. As per 40 C.F.R. Part 122.21 (d) (2) (iv) (v) and in accordance with the exemption of 40 C.F.R. 264.1 (g) (6); further permitting it not required.

This waste was listed as D007 on our notification form 8700-12 of 7/30/80. It will remain on our subsequent notification of January 1983, only because we generate this waste.

PAINT BOOTH WASTE

This waste was listed as an F017 on our notification form 8700-12 of 7/30/80. However, this number was removed from the Hazardous Waste List in Federal Register, January 16, 1981. As it no longer

falls under any of the hazardous waste regulations, it will not appear on our subsequent notification.

We generate approximately 30 55-gallon drums per month. This is being disposed of in a landfill on Illinois Permit No. 811523.

TREATED PAINT BOOTH WASTE

This waste was listed as an F018 on our notification form 8700-12 of 7/30/80. This number has also been removed from the Hazardous Waste List in Federal Register, January 16, 1981. This waste does not fall under any of the hazardous waste regulations and will not be listed on our subsequent notification.

We generate approximately 80 gallons of this waste per month to be disposed of in a landfill under S.W.A. Permit No. 5703032582-6.

ACETONE

Listed on Form EPA 8700-12 of 7/30/80 as a U002. Since our production process no longer generates any waste Acetone, it is deleted from our subsequent notification form of January 1983.

PENTACHLOROETHANE

Listed on Form EPA 8700-12 of 7/30/80 as U184. Since our production process no longer generates any waste Pentachloroethane it is deleted from our subsequent notification form of January 1983.

INDUSTRIAL WASTE LISTING
AMANA REFRIGERATION, INC.
AMANA, IOWA
NOVEMBER, 1982

TOLUENE

Toluene is a listed waste from non-specific sources, No. F005 (I) (T), as indicated in 40 CFR 261.31.

This waste is generated from the cleaning and flushing of our (acrylic paint) painting operations; in 1982 we generated from January through October, 225 55-gallon drums, which is accumulated in our hazardous waste storage area, to approximately 75 drums. It is then shipped out for recycling. Anticipated quantity to be generated in 1983 is 310 drums.

This waste requires a Part B permit as indicated in 40 C.F.R. 261.6 (b) 1 - 6.

This waste was listed on our Part A, Form 3 application of 1980 as an F005 and will appear as an F005 on our amended Part A application and our future Part B application.

RAW PAINTS

Raw Paint is a listed waste No. F005 and F003 (I) (T) for its content of Halogenated Solvents, as indicated in 40 C.F.R. 261.31.

Raw Paint waste is only generated from an accidental leak, spill or contamination of the raw product. The amount generated is very minimal; in 1981 to October 1982, none was generated.

This waste requires a Part B permit, as required in 40 C.F.R. 261.3 (2) (iii).

This waste was listed on our Part A, Form 3 application of 1980 as F017. As F017 it was removed from the Hazardous List, Federal Register, January 16, 1981, and now falls under F005 and F003 (I) (T), as it will appear on our future Part B and Part A application.

ELECTRO-DEPOSITION OF PAINT

Electro-deposition painting generates a number of wastes in the process. Waste is generated from filter cleaning and tank maintenance.

Electro-deposition paint is a composition of three basic parts: Vehicle, Paste, D.I. Water. The waste solution is treated with caustic soda to a P.H. of 12. This separates the suspended solids from the liquid. This then leaves a firm, rubbery-like waste sludge. The liquid parts is decanted and treated with sulfuric acid, sodiumsulfite and polyelectrolite. This precipitates the dissolved metals. This sludge is then disposed of under S.W.A. Permit No. 5703032582-6. The liquid decant is discharged under N.P.D.E.S. Permit No. 48-02-01-02, outfall No. 002.

The removed rubbery solid waste was formerly a listed waste, No. F018, now a non-existing number; from 1980 through the present time we have generated 20 55-gallon drums now stored in our hazardous waste storage area. The anticipated rate of generation for 1983 is 8 drums. The maximum estimated quantity in storage at any one time is 70 drums. We firmly believe this is not a hazardous waste and are presently testing this waste for EP toxicity to show that it can be excluded under 40 C.F.R. 261.3 (d) (1). As such it will not be included in either our amended Part A or Part B applications.

ANOLYTE AND PERMEATE

Also generated by the electro-deposition painting process, the anolyte is removed by a membrane filtering system removing a clear, acidic liquid build-up from the unit. This is mixed with the permeate before treatment.

The permeate is generated from an ultra-filter (membrane type) removing the surplus liquid generated from D.I. water rinsing of the painted parts. The resulting mixture is then batch-treated with sodiumsulfite and polyelectrolite to precipate the heavy metals. The liquor is then decanted and discharged in outfall 002 N.P.D.E.S. Permit No. 48-02-01-02. The resulting sludge under S.W.A. Permit No. 5703032582-6 is disposed of in a landfill.

Of the above mixture we generate approximately 2,000 gallons a month resulting in approximately two gallons of sludge per month. In addition, one product is used to clean the ultra-filter approximately four times a year. "Additive Z" is used as a cleaning agent for the filter membrane. This generates approximately 450 gallons per cleaning. This is treated with alum, sulfuric acid, sodiumsulfite and polyelectrolite. The resultant liquid is decanted and discharged in outfall No. 002 N.P.D.E.S. Permit No. 48-02-01-02. The resulting sludge, approximately 20 gallons, is disposed of in a landfill as S.W.A. Permit No. 5703032582-6. As with the previous waste, this is also excluded under 40 C.F.R. 122.21 (d) (2) (IV)(V) and 40 C.F.R. 261.4 (a) (2).

This waste will not be listed on our amended Part A application or Part B as it is exempt by 40 C.F.R. 122.21 (d) (2) (IV) (V) and 40 C.F.R. 261.4 (a) (2).

These wastes were listed as F018 on our Part A, Form 3 application of 1980. The waste No. F018 is a non-existing number as of January 16, 1981. Therefore, these wastes will no longer be listed on our amended Part A application or our future Part B application.

1-1-1 TRICHLOROETHANE

This waste is generated from the hand-wiping of small metal parts; January - October, of 1982, 150 gallons were generated. This is

stored in the hazardous waste storage area and from time to time is shipped out for recycling. The anticipated amount to be generated in 1983 is 210 gallons. The maximum estimated quantity in storage at any one time is 8 drums.

The above is listed as Waste No.F001 and requires a Part B permit per 40 C.F.R. 261.6 (b) 1 - 6.

This waste was listed as an F001 on our Part A, Form 3 application of 1980 and will remain an F001 on our amended Part A application, and Part B permit application.

WASTES FROM URETHANE-FOAMING OPERATION, TOLUENE DIISOCYONATE (PART A), POLYETHERPOLYOL (PART B).

TOLUENE DIISOCYONATE (PART A)

This is used as Part A of a uretane foam insulation process; also used in this process is Part B, Polyetherpolyol.

The waste generated from this operation results from minor contamination of moisture or small spills such as a leaking seal on a pump, cleaning of a filter, etc. The two wastes are kept segregated from each other, therefore, leaving a waste much like the raw product received from the vendor.

Toluene Diisocyonate Part A is a listed waste, No. U223 (T), 40 C.F.R. 261.3 (a) (2) (ii). The Toluene Diisocyonate was listed

as a U-223 on our Part A, Form 3 application in 1980. This waste will remain a U-223 on our amended Part A, Form 3 application and Part B permit application.

Since November 1979 we have generated 40 55-gallon drums, stored in the hazardous waste storage area, where it will be stored until approximately 70 drums are accumulated at which time a permit will be obtained for proper disposal. The estimated quantity to be generated in 1983 is 16 drums.

POLYETHER POLYOL (PART B)

This is a hazardous waste as per 40 C.F.R. 261.3 (b) (3) and falls under D003 for reactivity.

The Polyether Polyol was listed as U-229 on our Part A, Form 3 application of 1980. This waste, No. U-229, is now a non-existing number, therefore it will be listed as D003 on our amended Part A, Form 3 application and Part B permit application.

We have generated 6 55-gallon drums from January through October, 1982. This waste is stored in our hazardous waste storage area, where it will be accumulated to approximately 70 drums, at which time a permit for proper disposal will be obtained.

The estimated quantity to be generated in 1983 is 9 drums.

METHYLENE CHLORIDE

This waste is generated from the urethane foam insulation operation. It is used to flush or clean the application equipment. Small quantities of Methanol and Urethane foam are mixed with the Methylene Chloride in the above operation. From January through October, 1982, we generated 15 55-gallon drums. This waste is stored in our hazardous waste storage area. It is accumulated to 75 drums, at which time it is sent for recycling. The estimated quantity for 1983 is 21 drums.

The above waste is a listed waste under 40 C.F.R. 261.6 (b) 1 - 6, and is listed as F002 and F003.

The above was listed on our Part A, Form No. 3 application of 1980 as F002, F003 and U238. Urethane foam as a U-238 number no longer exists, as per 40 C.F.R. 261.33 (f).

The waste will be listed as an F002 and F003 on our amended Part A, Form 3 and Part B permit application.

SODIUM HYDROXIDE (KOLENE SALT)

This waste is generated from our paint stipping operation. We generate approximately 4,000 lbs. a month. This waste is batch-treated by dissolving the Sodium Hydroxide in water. This results in a liquor with a pH of 13.5 and approximately 10% suspended solids.

After settling, the liquor is decanted and used as a caustic solution to raise the pH of the Chromium and Zinc waste treating system and becomes part of our Outfall No. 003 NPDES Permit No. 48-02-01-02. The solids part of the waste are used to raise the pH of the batch treatment of our paint booth waste and becomes part of our S.W.A. permit No. 5703032582-6. The above procedure renders the Sodium Hydroxide (Kolene Salt) waste non-hazardous, in accordance with 40 C.F.R. 122.21 (d) (2) (vi) and 40 C.F.R. 264.1 (g) (6).

This stream is excluded from regulation. Therefore it will not appear on our Part B permit application and our amended Part A, Form 3 application.

The above was listed on our Part A, Form No. 3 permit application of 1980 as D002. It was listed two (2) times; once for storage and disposal in a hazardous waste landfill and once to store and treat to render it non-hazardous.

HEXAVALENT CHROMIUM RINSE

Hexavalent Chromium is generated in our parts washer prior to our painting operation. It is used as a recirculated rinse following a zinc phosphatizing process. In addition, this is followed by a D.I. water recirculated rinse and a final rinse of

D.I. water. This rinse overflows the recirculated rinse tank which contains Chromium VI. This then is pumped into an underground 5,000 gallon equalization tank, complete with inspection access manhole, then pumped into a treatment tank where Sodium Bisulfite and Sulfuric Acid are added to reduce the Hexavalent Chromium to Trivalent Chromium. This then gravity-flows into a two-stage pH adjustment system, adjusting final pH to 9.5. Ferrous Sulfate is also added in this process. The effluent then gravity-flows into two (2) membrane filtering systems, removing the suspended solids from the liquor. The clear effluent is then discharged into Outfall 003 NPDES Permit No. 48-02-01-02. The remaining solids are then pumped into a centrifuge. The resulting centrate is recirculated into the pH adjustment tanks. The remaining sludge out of the centrifuge is then processed by a vacuum filter and is disposed of in a landfill under S.W.A. Permit No. 5703032582-6. We generate approximately 9,000 gallons of Chromium rinse a day. The above process renders this waste non-hazardous. As per 40 C.F.R. Part 122.21 (d) (2) (iv) (v) and in accordance with the exemption of 40 C.F.R. 264.1 (g) (6), it will not appear on our Part B permit application and our amended Part A, Form 3 application. Previously the above was listed on our Part A, Form 3 application of 1980 as a D007, as per 40 C.F.R. 261.3 (b) (3).

PAINT BOOTH WASTE

This waste was listed on our Part A, Form 3 application of 1980 as F017. However, this number was removed from the Hazardous Waste

List in Federal Register, January 16, 1981. As it no longer falls under any of the Hazardous Waste Regulations, it will not appear on our amended Part A, Form 3 application or our Part B application.

We generate approximately 30 55-gallon drums per month. This is being disposed of in a landfill on Illinois E.P.A. Permit No. 811523.

Treated paint booth waste was listed on our Part A, Form 3 of the application of 1980 as F018. This number has also been removed from the Hazardous Waste list in Federal Register, January 16, 1981. This waste does not fall under any of the Hazardous Waste regulations. It will not be listed in our amended Part A, Form 3 application.

We generate approximately 80 gallons of this waste per month to be disposed of in a landfill under S.W.A. Permit No. 5703032582-6.

JANUARY - 1982

REVISED JANUARY - 1983

AMANA REFRIGERATION CLOSURE PLAN

Amana Refrigeration, Inc.
Amana, Iowa 52204
(319) 622-5511

AMANA REFRIGERATION, INC. CLOSURE PLAN

The maximum anticipated amount of waste in storage and in treatment is estimated to be 50,270 gallons.

The following is a description of the steps needed to decontaminate each of the hazardous waste generating, storage and treatment systems at Amana Refrigeration, Inc.

1. Chrome waste - The chrome stages in both the large and small washers will be treated in the same manner. The parts washer tank will be drained to the waste treatment plant. After it is drained, it will be decontaminated. Plastic line from the parts washer to the waste treatment will be flushed and decontaminated. Liquid from this operation will be treated at the waste treatment plant.

   The underground storage tank at the waste treatment plant then will be drained and run through the Water Purification System (W.P.S.). The tank will be flushed and then decontaminated. This liquid will also be run through the W.P.S. units. Next, the reduction tank will be drained and run through the W.P.S. unit. After this is done, both P.H. adjustment tanks will be flushed and decontaminated. This liquid will also be run through the W.P.S. units. The remaining liquid in the W.P.S. units will be pumped into a batch treatment tank and treated in that tank. The flush water and decontamination water will also be treated in the same manner. All sludges from this action are non-hazardous and will be disposed of in an approved landfill.

2. Paint mix tanks and piping will be drummed and sent to a disposal facility. The tank and line will be flushed and decontaminated; that waste, including all waste solvent, will also be sent to a recycler.

3. Kolene salt - The paint strip unit will be emptied into 55-gal. drums. Drums will be taken to waste treatment building where it will be treated. By dissolving salts the resulting decant will be treated in water purification system. The sludge will be neutralized with sulphuric acid to make it non-hazardous and then disposed of in an approved sanitary landfill.

4. Foam Department - All storage tanks will be drained and the liquid will be sent back for reuse. Then the storage tanks, all piping and foaming equipment will be flushed and decontaminated. The sludges produced from this procedure will be drummed. The drums will be disposed of at an approved disposal site. The liquid flushed from this process will be sent to a recycler.

5. Electro-Deposit Paint System -

   1) Reduce volume by operation of anolyte membrane system and ultra-filter system.

   2) Batch-treat remaining paint with caustic decant liquid and treat as shown in Step 3. Dispose of treated paint sludge in approved disposal site.

   3) Treat anolyte permeate and decant liquid from Step 2 to make non-hazardous. Decontaminate treatment tanks and dispose of non-hazardous waste sludge in approved disposal site.

6. Accumulations of waste in the storage area will be sent for recycling or disposal, as applicable.

The final closure of the facility will be within 90 days after production shutdown.

Cost estimate for facility closure for 1982 is $31,178.00. Cost estimate will be up-dated in accordance with 40 CFR 265.142.

Liability requirements - An endorsement to our present insurance policy will be obtained, with the provisions required by the EPA.

Closure requirements - A surety bond guaranteeing payment into a closure fund will be obtained when required by the EPA.

JANUARY - 1982
REVISED JANUARY - 1983

HAZARDOUS WASTE CONTINGENCY PLAN
AND EMERGENCY PROCEDURES

F O R

AMANA REFRIGERATION, INC.
FIRST AND D STREET
MIDDLE, IOWA 52307

P R E F A C E

THE PURPOSE OF THIS CONTINGENCY PLAN IS TO DESCRIBE THE ACTIONS FACILITY PERSONNEL MUST TAKE IN RESPONSE TO FIRE, EXPLOSION OR RELEASES OF HAZARDOUS WASTE TO THE ENVIRONMENT.

THIS PLAN WILL BE REVIEWED AND AMENDED WHENEVER APPLICABLE REGULATIONS ARE REVISED, THE PLAN FAILS IN AN EMERGENCY, THE FACILITY CHANGES IN A MANNER THAT IMPACTS RESPONSE TO AN EMERGENCY, THE LIST OF EMERGENCY COORDINATORS CHANGES OR THE LIST OF EMERGENCY EQUIPMENT CHANGES.

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I. FACILITY DESCRIPTION

1. The Facility is used to manufacture home freezers, combination refrigerator-freezers and microwave ovens. It has 1,300,000 sq. ft. of floor space, employing approximately 3,000.

   The Facility's manufacturing operation is 16 hours for 5 days a week, except for maintenance of equipment which operates 24 hours for 5 days a week.

   Other plant activities are normally conducted from 8:00 A.M. to 5:00 P.M., Monday through Friday. Security is provided by 2 Security Guards, on duty 24 hours, 7 days a week.

   Communications are provided for fire brigade, sprinkler alarm, area or plant evacuation for fire or other emergencies, summon emergency coordinator and other designated hazardous spill control personnel.

   Communication equipment consists of a radio voice and signal system by speakers located throughout the Facility; by telephones located throughout the Facility; capability to communicate over radio voice system and by hand-held 2-way radio.

   Sprinkler system fire alarm is by sound signal and annunciator board monitored by Security Guards.

   First-Aid Facility is located in the manufacturing area and is attended by a nurse 16 hours, Monday - Friday.

   The Facility is protected by 33 wet and 9 dry sprinkler systems, plus 1-1/2" hose lines strategically located throughout the Facility and on the roof. In addition to the above, fire hydrants are located around the outside of the Facility housed in enclosures containing 2-1/2" fire hoze nozzles and related equipment.

   Water is supplied from a 150,000-gallon underground tank and a 1,000 G.P.M. electric motor-driven fire pump and/or from a 300,000-gallon above-ground steel storage tank and a 1,500 G.P.M. diesel-driven fire pump and/or a 100,000-gallon water tower (50# pressure gravity only). All above conforms to Industrial Risk Insurance specifications for sprinkled areas and buildings. See Appendix B.

   The Facility is divided by fire walls and fire curtains isolating fire hazardous materials from production areas and production areas from finished product warehouse areas. For locations, see Appendix B.

2. Nature of Waste Streams -

Hazardous waste is generated from the following:

A. Parts Washer
B. Spray Paint Booths
C. Automatic Paint Spray System
D. Electro-Deposition Paint System
E. Kolene Paint Strip Operation
F. Raw Paint Products from Manufacturer
G. Polyurethane Foaming Operation
H. Hand Cleaning of Production Parts

Waste Generation -

Location	Waste	EPA Hazardous Waste Number	DOT Number	Hazard Code
A.	Chromium	D007	UN1755	EP Toxicity
B. & C.	Toluene	F005	UN1294	Flammable Liquid
D.	Raw Paint	D008	NA9189	EP Toxicity
	Anolyte & Permeate	D008	NA9189	EP Toxicity
	Additive "Z" Cleaner	D008	NA9189	EP Toxicity
E.	Sodium Hydroxide (Kolene Salt)	D002	NA9188	Corrosive
F.	Raw Paint	D001	UN1263	Flammable Liquid
G.	Polyether Poly	D003	NA9188	Reactive
	Toluene Diisocyanate	U223	NA2078	Poison B
	Methylene Chloride	F002 & F003	UN1593	Toxic
H.	1-1-1 Trichloroethane	F002	UN2831	Toxic

3. Treatment & Storage Facility -

The Treatment Facility is located in the southwest corner of the company property, approximately 800' south of the production facility. The Facility is used to house all treatment equipment and for all waste treatment requirements of this facility including all sanitary waste. The Facility treats two (2) hazardous wastes to render them non-hazardous.

A. Hexavalent Chromium is treated by reducing the hexavalent chromium to trivalent chromium. This is then further treated to remove the chromium from the liquid by processing it in a water purification system. The resulting sludge is now no longer toxic and is disposed of in a sanitary landfill.

B. Sodium hydroxide (Kolene salt) is the waste resulting from stripping paint from equipment used in the painting operation. It is a solid material with a pH of approximately 14. It is treated by dissolving this waste in water. The resulting decant is then used to adjust the pH in the water purification system. The remaining solids become a part of the Paint Booth waste.

C. The anolyte and permeate wastes are generated in our Electro-Deposition paint system. This waste is pumped to the waste treatment plant by a pumping station and pipeline located in the Painting Department. These wastes then are treated with sodium sulfide and polyelectrolite to precipitate the heavy metals, making them non-hazardous.

The paint wastes from our Electro-Deposition paint system are generated by spills of water-suspended paint from the 12,000 gallon paint tank. This paint tank has a containment around it to protect against uncontained spills. From the containment area the spill will run into a holding tank. The waste is then treated in small amounts with caustic soda to precipitate the suspended paint. The decant is then added to the anolyte and permeate for treatment at the waste treatment plant. The paint is a non-hazardous waste at that point and can be disposed of in an approved landfill.

The Additive "Z" cleaning solution is drumed after use in the Electro-Deposition filter and taken to the waste treatment for treatment.

D. Storage Facility (Hazardous Waste) - The drum storage and containment area is located 210' south of Building No. 44 and 50' south of ABS Plastic Storage silos. It consists of a concrete slab, 82' x 45', divided into five (5) curbed sections, pitched to a sump. Each sump is valved. Valves are kept closed except to drain rain water after test for contamination. A six foot high industrial fence surrounds the containment area. The gate is kept locked. All required signs are posted and the area is illuminated as required for hazardous waste storage areas.

The area is capable of storing 780 55-gallon drums. The materials stored are:

1) (Kolene Salt) Sodium Hydroxide Waste
2) Raw Paint Waste
3) Toluene Waste
4) 1-1-1 Trichloroethane Waste
5) Toluene Diisocyonate Waste
6) Polyether Polyol Waste
7) Methlene Chloride Waste

See Appendix B & C.

II. LIST OF EMERGENCY COORDINATORS

Primary Emergency Coordinators for:	Name	Phone Ext.	Residential Telephone No.
Fire, Spill or Leaks of Hazardous Materials	Robert Steiff Supt. Waste Treat.	2265	[redacted]
	Fritz Marz Chief, Fire Brigade	2190	[redacted]

Ex. 6 PII

Alternate Coordinators for Fires, Spills or Leaks of Hazardous Materials:

Name	Title	Shift	Phone Ext.	Residential Telephone No.
Clarence Reihmann	Ass't.Fire Chief	1	2118	[redacted]
Arnold Moessner	Ass't.Fire Chief	1	2112	
Don Mason	Ass't.Fire Chief	2	2511	
Roger Volz	Captain	2 Auto Call	45	[redacted]
Richard Vulysteke	Ass't.Fire Chief	3 Auto Call	21	[redacted]

Ex. 6 PII

1. Additional Emergency Notification:

	Ext.	Residential Telephone No.
Bart Schuchert, Ind. Engineer (Foam)	2223	[redacted]
Chester Gray, Safety Director	2127	
Dennis Meyer, Manager-Labor Relations	2126	
Dale Henry, Production Manager	2252	
John Wetz, Paint Superintendent	2297	

Ex. 6 PII

Above list is posted in the following areas:

Waste Treatment Bldg. Hazardous Waste Storage Area (By Phone)
Urethane Foam Production Area, Guard House (East)
Guard Procedure Manual, Safety Equipment House

2. Outside Contacts: The following agencies are to be contacted if the emergency requires outside help or the condition threatens human health or the environment outside the facility or necessitates the evacuation of the area.

	Local Agencies	Phone
A.	Fire Department	622-3333
	County Sheriff	642-5613
	Amana Medical Clinic	622-3231
	County Civil Defense	642-5613
B.	National Response Center	800-424-8802
C.	IDEQ Region 6, Washington, IA	319-653-2135
	DEQ Spill	515-281-8694
D.	Chemtrec Emergency Spills	800-424-9300

Information to be furnished is:

A. Name and telephone number of person reporting emergency.

B. Name and address of Facility.

C. Time and type of incident such as release, or fire, etc.

D. Extent of injuries, if any.

E. The possible hazard to human health or the environment outside of Facility.

F. Name of Hazardous Substance - Chemical Name _____.

G. Quantity spilled or involved in the emergency (fire or explosion) _____.

H. Control measures underway _____.

I. Nature of assistance required - fire fighting, traffic control, evacuation, medical assistance (State or local agencies must be advised as to the specific nature of assistance needed.) _____.

For Hazardous Substance Emergency Chart, see Appendix D.

For Contractor Clean-Up Transportation and Disposal, see Appendix E.

III. EMERGENCY EQUIPMENT

A. Fire Protection Equipment:

1. The in-plant areas are protected by overhead sprinklers plus 20-lb. A.B.C. Dry Chemical fire extinguishers and 1-1/2 hose lines delivering 35 - 50 GPM.

2. The hazardous waste storage area equipment consists of the following:

   6 - 20-lb. A.B.C. Dry Chemical extinguishers
   2 - fire hydrants located approximately 150' from the storage area. The hydrant house is supplied with approximately 500' of 2-1/2 fire hoses, fire nozzles, bar, wrenches, lantern, fire axe.
   4 - hose streams are available; each could supply 250 GPM

3. In addition to above equipment, there is a mobile fire unit containing 150-lb. Dry Chemical (ABC) extinguisher, and:

   2 - 2-1/2 gal. foam units
   4 - self-contained breathing apparatuses
   4 - 50' length of fire hose

B. Protective Clothing:

   4 - sets of chemical resistant gloves
   4 - sets of chemical resistant coat, pants & boots

C. Chemical Spill Clean-Up Materials:

   2 - shovels, brooms, mops and buckets
   3 - contractor's pumps located in Bldg. 51
   1 - air-operated pump located in Bldg. 54
   1 - eye and safety shower
   - approximately 600-lbs. Floor-Dri
     600-lbs. Hazorb absorbent material

D. Respiratory Protective Equipment:

   2 - 30-minute self-contained breathing apparatuses with extra air tanks.

All of the above are located at Safety Equipment House unless stated otherwise. For location of emergency equipment, see Appendix B.

LIST OF EQUIPMENT & CHEMICALS FOR SPILL CLEAN-UP

Storage Cabinet, East Wall of EPS Expansion Room:

1. Air Line Respirators - with full face piece, air hoses.
2. Throw-away overshoes, coveralls gloves.
3. Two (2) No. 12 scoop shovels.
4. Four (4) brooms.
5. Two (2) Plastic 5-gallon Buckets.
6. Two (2) 10-Quart Graduated Buckets.
7. One (1) Mop.
8. Two (2) Push Brooms.
9. Two (2) Long-Handled Scrapers.
10. Two (2) 4-inch Putty Knives.
11. Two (2) Squeegies.

Drums for Disposing of Clean-up Material:

1. Six (6) 17H & 17E drums. Top Shelf of Drum Storage Rack (next to the New Foam bulk storage); also E6800 plastic drums.

Chemical Storage Cabinet, East Wall of EPS Expansion Room:

1. Aqueons Ammonia. *
2. Tincture of Green Soap. *

Paint Mix Room, Top Shelf of Paint Storage Racks:

1. Isopropol Alcohol. *
2. Perchloro Ethylene. *

* The above chemicals are not pre-mixed.

Solution to use for neutralization of area after spill is cleaned up and to neutralize material from the clean-up:

Formula for 50-gallon batch -

1. 5% Aqueons Ammonia - 2.5 gallons.
2. 10% Isopropol Alcohol - 5 gallons.
3. 2% Tincture Green Soap - 1 gallon.
4. 83% Water - 41.5 gallons.

Premixed solutions of this chemical can be found in the following areas:

1. Old Foam Bulk Storage area.
   A. One (1) 50-gallon drum of mix solution.
   B. 165 pounds of Hazorb.
2. New Foam Bulk Storage area.
   A. Two (2) 50-gallon drums of mix solution.
   B. 165 pounds of Hazorb.
3. Under Stairs going to Old Foam Mezzanine.
   A. One (1) 50-gallon drum of mix solution.

IV. EMERGENCY RESPONSE ACTIVITIES

A. Fire/Explosion

1. Emergency notification, during facility occupancy. The fire brigade and emergency coordinators are notified as described in facility description under "In-Plant Communications Capability." When facility is unoccupied except for Security Guards, the local fire department and emergency coordinators will be summoned by telephone.

2. During a fire, the emergency coordinator will take all reasonable measures to insure that the fire or explosion does not spread to other areas of the plant. This is accomplished by removal of hazardous waste or other products that would cause the fire to spread or an explosion to occur. If removal or isolation is not possible he will use all other means at his disposal to prevent the spread of the fire or to contain it.

3. When the fire or explosion involves or has the potential to involve hazardous waste which because of the quantity, strength or toxicity, creates an immediate or potential danger to the public health or safety, the emergency coordinator must contact the following agencies to implement the evacuation plan.

   a) Iowa County Sheriff Department 642-5613

   b) Iowa County Civil Defense Director 642-5613

   c) Iowa Department of Environmental Quality, Region 6, Washington, IA 653-2135
      DEQ Spill (515)281-8694

   If the above agencies cannot be reached, the National Response Center must be notified; telephone 800-424-8802.

   The information furnished to above agencies when reporting is as follows:

   a) Name and telephone number of reporter.

   b) Amana Refrigeration, Inc., Amana, Iowa.

   c) Time and type of incident.

   d) Name and quantity of materials involved.

   e) Extent of injuries, if any.

   f) The possible hazards to human health or the environment outside the facility.

4. The emergency coordinator must provide for clean-up and storage of any waste spilled as a consequence of fire and any material contaminated as a result of clean-up activities.

   a) No waste that is incompatible with the released material can be treated, stored or disposed of until clean-up procedures are completed in the affected area.

   b) All emergency equipment listed in the contingency plan must be cleaned and ready for re-use before operations are resumed.

   c) Notification to local, state or federal emergency response agencies must be made after Section 4(a)(b) are complied with and before operations are resumed.

5. A written report on the incident must be submitted to the Regional Administrator within 15 days after the incident. This report must include:

   a) Name, address and telephone number of the owner or operator.

   b) Name, address and telephone number of the facility.

   c) Date, time and nature of incident.

   d) Name and quantity of materials involved.

   e) The extent of injuries, if any.

   f) An assessment of actual or potential hazards to human health or the environment.

   g) Estimated quantity and disposition of the recovered material that resulted from the incident.

B. Spill Response

The Spill Response Plan is implemented using the same procedure as the Fire/Explosion Plan, See IV-A.

The following personnel are Spill Control members:

Waste Treatment	Shift	Fire Brigade	Shift
Thomas Hoyer	1	Arnold Moessner	1
Frank Ollinger	1	Clarence Reihmann	1
		Doug Vranek	1
		Arnie Sandvick	1
		G. (Pete) Glosser	1
		Richard Brummel	1
		Don Mason	2
		R. Volz	2
		L. Steele	2
		S. Wilhelm	2
		Bud Vulysteke	3

Equipment available for spill control and clean-up, see Emergency Equipment III.

In addition to above, the following equipment is available:

1. Catepillar end loader
2. Industrial tractor with end loader & grader plate
3. 1 - gasoline-driven pump 600 GPM capacity
4. 2 - dump trucks
5. 3 - power buckies 12-ft. capacity

Additional equipment available from Iowa County Civil Defense. Phone 642-3151 for the following:

1. 2 - Scott air packs with extra tanks
2. 2 - Acid suits
3. 2 - Toxicity suits with gas masks (See Appendix J)

Amana Refrigeration, Inc. is capable of handling all spill clean-up except for liquids in large volumes. Should this size of a spill occur, a contractor equipped to pick up and haul to a disposal or storage site would be employed, such as:

Chemical Pumpers & Incinerators
P.O. Box 1798
Highland, IN 46322
Phone: (219) 924-2951

Mud River Trucking, Inc.
Midwest Regional Office
5329 Second Avenue
Des Moines, IA 50313
Phone: (515) 244-3014

V. EVACUATION PROCEDURE

For Facility Evacuation Procedures, see Appendix H, page 5.

For Facility Drawing and available means of egress, see Appendix G.

For Evacuation Alarm System, see Appendix H, page 2.

VI. COORDINATION WITH STATE AND LOCAL AGENCIES AS REQUIRED BY 40 C.F.R. 262.34 (A) (5)

1. Fire Departments - The Fire Department's responding to an emergency call is of a voluntary nature, consisting of four departments. The nearest to the facility is located approximately two city blocks from the facility; the farthest is four miles away. Since the Fire Departments consist of a voluntary group, many are regularly employed in the facility and are totally familiar with our hazardous wastes. However, yearly familiarizing tours are conducted for members of the four departments.

   When the facility is unoccupied (non-production hours) the Security Guards will by phone call 622-3333. This will summon all four departments to the emergency. The Security Guard will also call an emergency coordinator should it be determined that additional assistance is required. The procedure is outlined in Additional Emergency Notification, page 4. For Correspondence with Fire Department, see Appendix J.

2. Since Amana Refrigeration, Inc. is located in an unincorporated area the local law enforcement agency is the Iowa County Sheriff. For notification data, see Appendix J.

3. In lieu of a local hospital, the Amana Medical Clinic is used for all emergency medical assistance. For notification data, see Appendix J.

4. For a Private Contractor, see page 8.

5. D.E.Q. is the regulatory agency. Amana is served by Region 6, Washington, Iowa. For data supplied, see Appendix J.

6. Iowa County Civil Defense Director - was contacted to provide assistance, if needed.

APPENDIX A

FIRE AND SPILL
RESPONSE ACTIVITIES FOR HAZARDOUS WASTE

1. Toluene (Toluol) Flammable Liquid

   A. Fire - Use ABC Dry Chemical fire extinguisher or water spray. Use self-contained breathing apparatus and chemical resistent clothing.

   B. Spills - For large spills use an explosion-proof pump to pump liquid into 17 E. drums Then use Hazorb, not Floor-Dry, to absorb the rest of the liquid; using non-sparking tools put the mixture into E6800 plastic DOT-approved drums. Take the drums to the hazardous waste storage area until disposal can be arranged.

   Note: Liquid can be recycled. Mixture of Hazorb material and liquid must be disposed of by incinerating.

   Note: Shut off all spark-producing electrical equipment. Also keep out all lift trucks or other sources that produce sparks or flame.

2. Raw Paint Flammable Liquid

A. Fire - For Class IB flammable liquid, use CO_2, ABC dry chemical, or foam extinguisher for all fires. Water spray may be ineffective. Water may be used to cool closed containers to prevent pressure build-up or explosion when exposed to extreme heat.

B. Spills - Stop all sources of ignition in the area. Use Hazorb, not Floor-Dry, to absorb the liquid and non-sparking tool to put the mixture into E6800 plastic DOT-approved drums. Take drums to hazardous waste storage area for storage until disposal can be arranged.

3. Toluene Diisocyanate - Poison B (Foam A Side)

A. Fire - Class III, combustible material - Use ABC dry chemical fire extinguisher or water to extinguish fires.

Note: TDI will burn in the presence of an existing fire or high heat source and adequate oxygen.

B. Spills - Use respiratory protective equipment, protective clothing, footwear and gloves. All other persons should promptly leave the contaminated area.

Use the following procedures for spills:

- Ventilate the contaminated area. Open all doors and windows and start all available exhaust fans. (Note: To avoid inhalation of the vapors of either TDI or the decontaminants used, workers should wear appropriate respiratory protective devices; e.g., a self-contained breathing apparatus.) Start all available exhaust fans.
- Completely cover the leak or spill with an absorbent material such as Hazorb, not Floor-Dry. Use an amount greater than is estimated to be necessary to absorb the TDI.
- Carefully shovel the absorbent TDI mixture into an open top E6800 plastic DOT-approved drum; cover, but do not make pressure-tight. Remove drums to outside area away from combustible materials.

- Soak the mixture in the container with a solution of 77% water, 5% Ammoniun Hydroxide, 2% tincture of green soap, 10% Isopropal Alcohol, and allow it to stand undisturbed for at least 24 hours. (WARNING: Considerable heat, which could cause ignition, will be generated when the aqueous ammonia solution is first applied. After standing 24 hours, however, the drum may be closed (though not pressure tight).
- Immediately after shoveling the absorbent-TDI mixture from the floor, complete the decontamination by mopping the floor with a solution of 77% Water, 5% Ammoniun Hydroxide, 2% tincture of green soap, 10% Isopropal Alcohol. Be sure the area is well ventilated both during and after clean-up.

Cold Weather Spills - During cold weather, spilled or leaked TDI may freeze. Under these conditions, the use of ammonia and water will merely coat the frozen material with an insoluble urea, stopping further reaction. It is essential, therefore, to use a solution, that will not only dissolve the frozen TDI, but will also form a liquid product during de-contamination.

- Estimate the quantity spilled, and make up a mixture of approximately 50% isopropyl alcohol and 50% perchloroethylene

by volume, using the same volume of each solvent as the estimated volume of spilled TDI. (Note: To avoid inhalation of the vapors of either TDI or the decontaminants used, workers should wear appropriate respiratory protective devices; e.g., a self-contained breathing apparatus.

- Completely cover the spilled material with the alcohol-perchloroethylene solution.
- Allow the solution to remain in place for at least one hour.
- Cover the area with enough absorbent material such as Hazorb, not Floor-Dry, to soak up all the liquid. Shovel this material into open top E6800 plastic DOT-approved drums. Store drums in hazardous waste storage area until disposal can be arranged. (Note: Thoroughly air or ventilate the decontaminated area to remove all traces of vapor.)
- Note: The use of decontaminating solvents and other chemicals may introduce additional hazards of toxicity and flammability. These materials, therefore, must be used with care and in strict compliance with the manufacturer's recommendations and precautions.

Major Spills - In the event of a major spill, a State of Emergency should be assumed to exist in the affected area.

- All persons not properly equipped with protective clothing and appropriate respiratory devices should immediately leave the site of the spill and should remain upwind.
- Only experienced and properly equipped personnel should attempt to isolate or contain the spill. Block all drains to prevent TDI from entering drainage system.
- Keep all improperly equipped and unauthorized personnel away from the spill area.

Disposal - Fully neutralized TDI must be disposed of by incineration. Unneutralized TDI must also be disposed of by incineration.

4. Methylene Chloride

Fire - Will not burn

Spills - Wear solvent resistant gloves and protective clothing. Also, self-contained breathing equipment will be used on a significant spill.

Cover spill with floor-dry; then put into 17H drums and remove to a hazardous waste storage area for proper disposal.

5. Polyether Polyol (Foam "B" Side)

Fire - Class III B, Combustible Liquids - Use ABC dry chemical extinguishers or water to extinguish a fire.

Note: Polyether Polyol will burn in the presence of an existing fire or high heat source and adequate oxygen.

Spills - If spills of polyol should occur:

- Small spills on hard surfaces can be absorbed by use of Hazorb, or sawdust, not Floor-Dry, and then can be swept up for disposal with scrap polyether polyol.
- Moderate spills should be collected in small containers or buckets.
- When large spills occur, drains should be blocked to contain the material. The polyol can be pumped into containers such as 17E drums or tank trucks for further disposal.

Personnel engaged in clean-up should observe appropriate skin and eye protection practices.

6. 1-1-1 Trichloroethane

Fire - Not a fire hazard; when material is involved in a fire use a self-contained breathing apparatus.

Spills - Use self-contained breathing apparatus, chemical resistent protective clothing and gloves. Spills should be absorbed with floor-dry and put in 17H drums; then removed to the hazardous waste storage area for disposal. Chemical-resistent clothing and self-contained breathing apparatus should be worn.

7. Kolene Salt

Fire - Will not burn.

Spills - Use chemical resistent clothing, gloves, and eye protection. Shovel spilled material into a new drum and take it to the hazardous waste storage area. Waste will then be treated in the treatment facility to render it non-hazardous and disposed of in an approved landfill.

8. Chrome Rinse (Parcolene 85B-60A)

Fire - Will not burn.

Spills - Spill should be absorbed with floor-dry and put into 17H. drums which should be taken to the hazardous waste storage area. Waste will then be treated in the treatment facility to render it non-hazardous and disposed of in an approved landfill site. Chemical goggles, face shield and protective clothing should be used.

9. Electro-Deposition Paint System Wastes

1. Raw Paint:

Fire - Will not burn.

Spill - All spills will be treated in small quantities at the collection tank next to the paint tank. The pH of the liquid will then rise to 12 with caustic soda to precipitate the paint. The clear decant will then be mixed with anolyte/ permeate and pumped for treatment at the treatment facility to render it non-hazardous.

Chemical goggles, face shield and protective clothing should be used.

2. Anolyte/Permeate & Additive "Z" Cleaning Solution

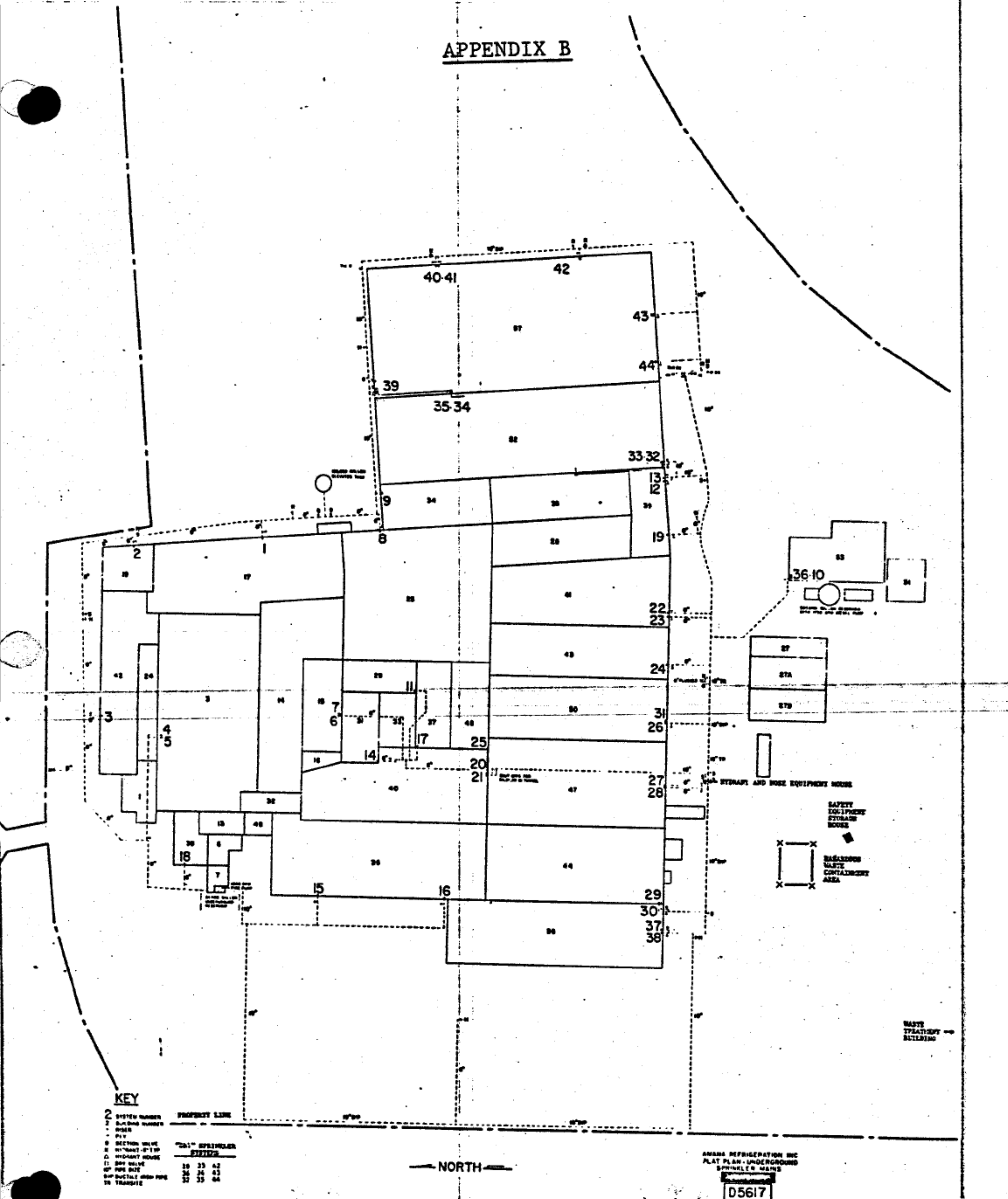
Fire - Will not burn.

Large Spills - The liquid should be pumped into 17E drums and taken to the treatment facility for treatment to render it non-hazardous.

Small Spills - On small spills, absorb the liquid with Floor-Dry and put into 17H drums. Take the drums to the treatment facility for treatment to render it non-hazardous.

On any spill, always use chemical goggles, face shield, and protective clothing.

APPENDIX B



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PLAT PLAN - UNDERGROUND
SPRINKLER MAINS
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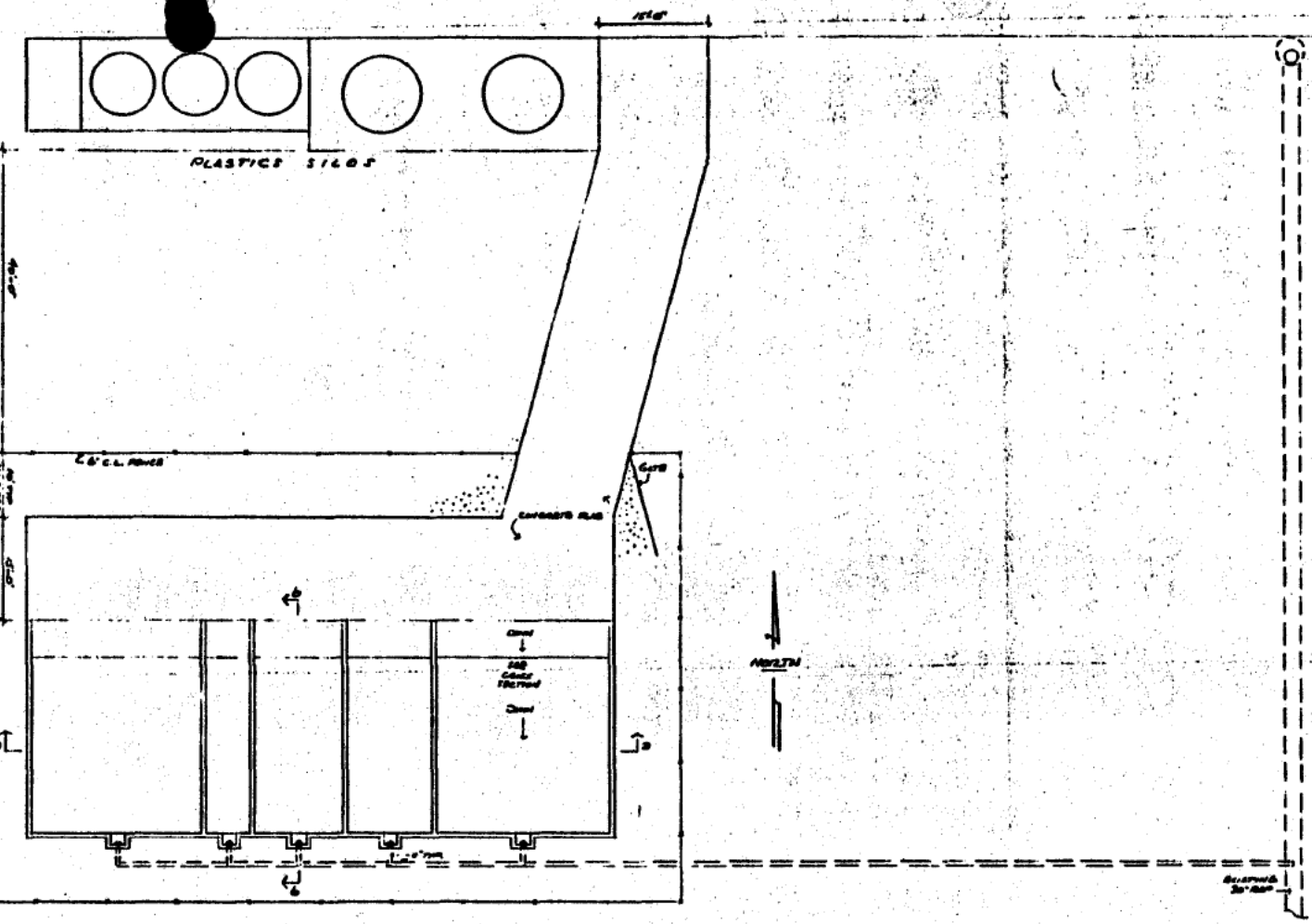

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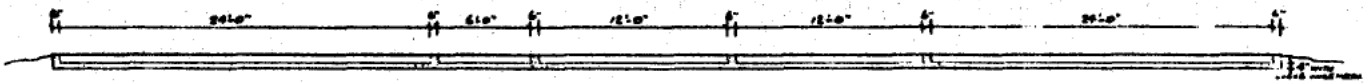

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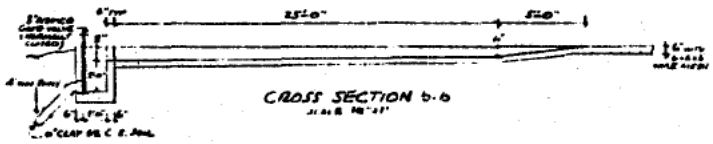

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APPENDIX C

DATE	REVISION

AMANA REFRIGERATION, INC.
AMANA, IOWA 52203

DRAWN BY _____ DATE _____
CHECKED BY _____ DATE _____
SCALE: _____

TITLE: HAZARDOUS WASTE STORAGE CONTAINMENT
PROJECT:

SHEET NO 1 OF 1
DWG NO D5815

HAZARDOUS SUBSTANCES EMERGENCY ACTION CHART

APPENDIX D - I

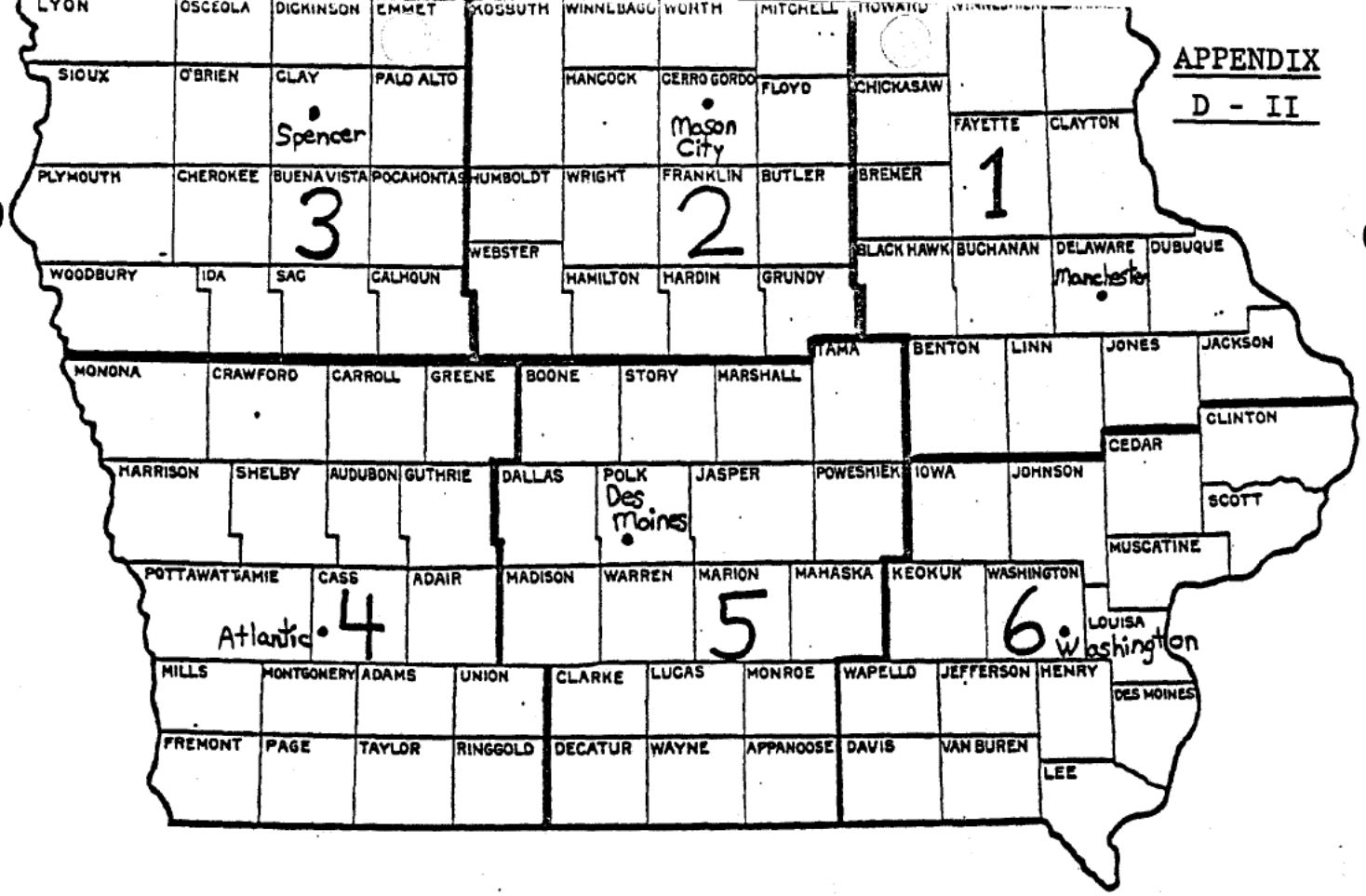
IN CASE OF TRANSPORTATION ACCIDENT INVOLVING THE FOLLOWING:		FOR INFORMATION CALL:	FOR ON-SITE ASSISTANCE CALL:	REQUIRED NOTIFICATION **
CHEMICALS (INCLUDING ALL PETROLEUM PRODUCTS)	RAIL	1 2 7 9 11 16	1 5 7 9 12	7
	TRUCK	2 7 9 11 16	5 7 9 12	7
	AIR	2 7 9 11 16	5 7 9 12	7
	WATER	2 7 9 11 16	5 7 9 12	7
COMPRESSED GASES	RAIL	1 2 7 9 11 16	1 5 7 9	7
	TRUCK	2 7 9 11 16	5 7 9	7
	WATER	2 7 9 11 16	5 7 9 12	7
CORROSIVE LIQUIDS	RAIL	1 2 7 11 16	1 5 7	7
	TRUCK	2 7 11 16	5 7	7
	WATER	2 7 11 16	5 7 12	7
EXPLOSIVES CLASS A & CLASS B	RAIL	1 7 9 11 16	1 5 7 8 9	7
	TRUCK	7 8 9 11 16	5 7 8 9	7
	WATER	7 9 11 16	5 7 8 9	7
FLAMMABLE AND COMBUSTIBLE LIQUIDS	RAIL	1 2 7 9 11 16	1 5 7 9	7
	TRUCK	2 7 9 11 16	5 7 9	7
	WATER	2 7 9 11 16	5 7 9 12	7
OXIDIZING MATERIALS	RAIL	2 7 11 16	1 5 7	7
	TRUCK	2 7 11 16	5 7	7
	WATER	2 7 11 16	5 7 12	7
AGRICULTURAL CHEMICALS: PESTICIDES, HERBICIDES, FERTILIZERS	RAIL	2 7 11 13 14 15 16	5 7 12 13 14 15	7
	TRUCK	2 7 11 13 14 15 16	5 7 12 13 14 15	7
	WATER	2 7 11 13 14 15 16	5 7 12 13 14 15	7
POISONS	RAIL	2 7 11 13 14 16	1 5 7	7
	TRUCK	2 7 11 13 14 16	5 7	7
	AIR	2 7 11 13 14 16	5 7	7
	WATER	2 7 11 13 14 16	5 7 12	7
RADIOACTIVE MATERIALS	RAIL	1 3 7 11 16	3 5 7	7
	TRUCK	3 7 11 16	3 5 7	7
	AIR	3 7 11 16	3 5 7	7
FLAMMABLE SOLIDS	RAIL	1 2 7 11 16	1 5 7	7
	TRUCK	2 7 11 16	5 7	7
	AIR	2 7 11 16	5 7	7
	WATER	2 7 11 16	5 7 12	7
RADIATION OR TOXIC MATERIAL EXPOSURE		7 16	3 5 7	7
CONTAMINATION OF WATERWAYS OR WATERSHED		7 10 12 16	5 7 10 12	7
UNIDENTIFIED HAZARDOUS SUBSTANCE		2 7 16	5 7	7
LIVESTOCK TOXICITY INCIDENTS		6 7 15 16	5 7 15	15

AGENCIES, FEDERAL, STATE, AND LOCAL, WHO CAN PROVIDE INFORMATION, ASSISTANCE, OR HAVE A NEED TO KNOW. THEY ARE KEYED AS FOLLOWS:

1. Bureau of Explosives, Assoc. of American Railroads..... 202-293-4048
2. CHEMTREC-National Agricultural Chemicals Assoc., Washington, D.C. 800-424-9300
3. Department of Energy, Chicago Operations Office.....(Duty hours) 312-972-4800
   (Off-duty hours) 312-972-5731
4. Co./Mun. Disaster Services/Sheriff's Department..... (24 hours)
5. Local Police or Fire Department.....
6. **Iowa Office of Disaster Services (notify only if 7 not notified) (24 hours) *515-281-3231
7. Iowa Department of Environmental Quality..... (24 hours) 515-281-8694
8. 543rd Ordnance Detachment (EOD Control)..... (24 hours) 314-263-6145
9. State Fire Marshal, Department of Public Safety.....(Duty hours) 515-281-5821
   (24 hours) 515-281-3561
10. Conservation Commission.....(Duty hours) 515-281-5384 -5385
    (Non-duty hours) 515-281-3231
11. U. S. Department of Transportation..... 202-426-1830
12. U. S. Environmental Protection Agency..... (24 hours) 816-374-3778
13. Poison Control Center, Iowa Methodist Hospital..... (24 hours) 515-283-6212
14. Poison Control Center, University of Iowa Hospitals & Clinics.. (24 hours) 800-272-6477
15. State Department of Agriculture.....(Duty hours) 515-281-5321
    (Non-duty hours) 515-281-3231
16. Motor Vehicles Div.,State Dept. of Transportation.....(Normal work day) 515-281-3047
    (24 hours) 515-281-5827

NOTES: 1. State agencies will notify their Federal counterparts.
2. Shippers and carriers must meet Federal notification requirements.
3. *Dept. of Public Safety Telecommunications systems can also be used, such as radio and the ICWA system.

Office of Disaster Services
(Revised 9/1/79)



REGION	WORK HOURS TELEPHONE	EMERGENCY AFTER HOURS COMMUNICATIONS
1-MANCHESTER	319/927-2640	319/927-3355 MANCHESTER POLICE
2-MASON CITY	515/424-4073	515/421-3000 CERRO GORDO CO. SHERIFF
3-SPENCER	712/262-4177	712/262-3221 CLAY CO. SHERIFF
4-ATLANTIC	712/243-1934	712/243-3512 ATLANTIC POLICE
5-DES MOINES	515/281-3622	515/281-8694 IOWA PUBLIC SAFETY -- PAGER 195
6-WASHINGTON	319/653-2135	319/653-2107 WASHINGTON CO. PUBLIC SAFETY
CENTRAL OFFICE	515/281-8694	515/281-8694 PAGER 185

COUNTIES BY REGION

(1)	Adair	4	(25)	Dallas	5	(47)	Ida	3	(71)	O'Brien	3	(90)	Wapello	6
(2)	Adams	4	(26)	Davis	6	(48)	Iowa	6	(72)	Osceola	3	(91)	Warren	5
(3)	Alamakee	1	(27)	Decatur	5							(92)	Washington	6
(4)	Appanoose	5	(28)	Delaware	1	(49)	Jackson	1	(73)	Page	4	(93)	Wayne	5
(5)	Audubon	4	(29)	Des Moines	6	(50)	Jasper	5	(74)	Palo Alto	3	(94)	Webster	2
			(30)	Dickinson	3	(51)	Jefferson	6	(75)	Plymouth	3	(95)	Winnebago	2
(6)	Benton	1	(31)	Dubuque	1	(52)	Johnson	6	(76)	Pocahontas	3	(96)	Winneshiek	1
(7)	Black Hawk	1				(53)	Jones	1	(77)	Polk	5	(97)	Woodbury	3
(8)	Boone	5	(32)	Emmet	3				(78)	Pottawattamie	4	(98)	Worth	2
(9)	Bremer	1				(54)	Keokuk	6	(79)	Poweshiek	5	(99)	Wright	2
(10)	Buchanan	1	(33)	Fayette	1	(55)	Kossuth	2						
(11)	Buena Vista	3	(34)	Floyd	2				(80)	Ringgold	4			
(12)	Butler	2	(35)	Franklin	2	(56)	Lee	6						
			(36)	Fremont	4	(57)	Linn	1	(81)	Sac	3			
(13)	Calhoun	3				(58)	Louisa	6	(82)	Scott	6			
(14)	Carroll	4	(37)	Greene	4	(59)	Lucas	5	(83)	Shelby	4			
(15)	Cass	4	(38)	Grundy	2	(60)	Lyon	3	(84)	Sioux	3			
(16)	Cedar	6	(39)	Guthrie	4				(85)	Story	5			
(17)	Cerro Gordo	2				(61)	Madison	5						
(18)	Cherokee	3	(40)	Hamilton*	2	(62)	Mahaska	5	(86)	Tama	5			
(19)	Chickasaw	1	(41)	Hancock	2	(63)	Marion	5	(87)	Taylor	4			
(20)	Clarke	5	(42)	Hardin	2	(64)	Marshall	5						
(21)	Clay	3	(43)	Harrison	4	(65)	Mills	4	(88)	Union	4			
(22)	Clayton	1	(44)	Henry	6	(66)	Mitchell	2						
(23)	Clinton	6	(45)	Howard	1	(67)	Monona	4	(89)	Van Buren	6			
(24)	Crawford	4	(46)	Humboldt	2	(68)	Monroe	5						
						(69)	Montgomery	4						
						(70)	Muscatine	6						

COMMERCIAL PUMPING and INCINERATION
OF ILLIANA
SUBSIDIARY OF A-1 DISPOSAL CORP.

Mailing Address:
P.O. Box 1798
Highland, IN 46322

Telephone: 219-924-2951
Chicago: 312-768-7570

Shipping Address:
9948 Express Dr.
Highland, IN 46322

APPENDIX E - I

September 4, 1981

Amana Refrigerator
Amana, Iowa 52307

Dear Mr. Steiff:

Thank you for the opportunity to describe C.P.I.'s services and capabilities. C.P.I., a subsidiary of A-1 Disposal Corp., Plainwell, MI., has been in industrial waste hauling since 1972 and has established a solid reputation of integrity. We have such current customers as: Dow, General Motors, Ford, Amoco, Conoco, Mobil, Marathon, Phillips, General Electric, U.S. Coast Guard, U.S. Enviromental Protection Agency, Michigan Department of Natural Resources, Inland Steel, Hammond Lead, Brunswick and Conrail.

In addition to having interstate transportation authority for hazardous waste materials, we provide emergency spill response anywhere, seven days a week/ twenty-four hours a day. Our spill equipment inventory includes vacuum trucks and tankers, semi-tractors and trailers, boats and bobcats, and 2,500 feet of oil boom.

At our Plainwell site, we have a full service chemical laboratory and high temperature incineration. Our technical staff includes a chemical engineer, chemists, toxicologists, pharmacists, biologist, flammable materials expert and specialists in hazardous waste management. Our transportation system and other chemical handling programs are linked to our "Systems 34" IBM computer.

Our personnel are trained, experienced, and equipped to safely handle spillages and clean ups of all types of hazardous materials. A-1 Disposal was the prime contractor to cost effectively and safely complete the three largest chemical clean ups in the State of Michigan to date. Also, we have extensive experience in tank and lagoon cleaning, monitoring wells and recovery wells, soil boring and split spoon sampling, cyanide and chrome treatment, and handling and disposing of PCB liquids, solids, transformers, and capacitors.

C.P.I.'s permit and licenses are:

United States Environmental Protection Agency	INT000646919
Michigan Department of Natural Resources Agency	197
Interstate Commerce Commission	MC 148355

State licenses in: Michigan, Indiana, Illinois, Missouri, Minnesota, New York and Wisconsin.

Thank you for the time and considerate attention you have given us. We are looking forward to being of service to you. If you have any questions, please do not hesitate to contact us.

Sincerely,

Commercial Pumping & Incineration

Henry C. Mendoza /akd

Henry C. Mendoza
V.P. Operations

HCM/akd

SUBSIDIARY OF A-1 DISPOSAL INC

SERVICE AREA:
Midwestern and Southern Regions — United States

LICENSED:
Michigan, Illinois and Indiana

I.C.C. PERMIT NO.:
MC-148355

AVAILABLE SERVICES:
Solid and Liquid Waste Hauling
Vacuum Truck and Tanker Services
Chemical/Hazardous Material Clean-Up
Surface/Subsurface Spill Clean-Up
Soil Borings
Hydrogeological Surveys
Chemical Laboratory Services
Tank and Lagoon Cleaning

SUBSIDIARY OF A-1 DISPOSAL CORP.

COMMERCIAL PUMPING and INCINERATION
OF ILLIANA

Mailing Address:
P.O. Box 1798
Highland, IN 46322

Telephone: 219-924-2951
Chicago: 312-768-7570

Shipping Address:
9948 Express Dr.
Highland, IN 46322

- R E F E R E N C E S -

COSDEN OIL & CHEMICAL CO.	- Gerald Hardin	312/862-6140
PICKER DUNLEE CORPORATION	- Cynthia Paul	312/547-9535
LAGRANGE LABORATORIES	- Laurel Anderson	312/764-6700
UNIROYAL, INC.	- Richard Carpenter	219/255-2181
ENERGY COOPERATIVE, INC.:		
C.F. INDUSTRIES	- Frank Jorgeson	219/397-4320
GENERAL MOTORS CORPORATION:		
A.C. SPARKPLUG DIVISION	- Gordon L. Schultz	313/766-2141
OLDSMOBILE DIVISION	- Doug Sturdivant	517/377-5160
FISHER BODY - KALAMAZOO	- Barry Boaz	616/385-0341
GENERAL ELECTRIC COMPANY	- Al Schlichter	312/299-2028
BRUNSWICK CORPORATION	- Bret Madsen	616/726-4761
AMOCO OIL COMPANY	- L. D. Otto	313/275-5500
GREENVILLE PRODUCTS COMPANY	- Dan Schulz	616/754-7131
MENASHA CORPORATION	- Les Phillips	616/692-6141
GENERAL FOODS CORPORATION B & B FOODS DIVISION	- James M. Giriffin	616/966-1174
DEPT. OF NATURAL RESOURCES	- Jack Bails	517/373-3503
ENSCO	- Charles Robertson Gene Parkinson	501/863-7173

RECEIVED

APR 30 1981

HOWARD R. GREEN CO.
Consulting Engineers

APPENDIX E -II

Mud River Trucking Inc.

Hazardous Waste Specialists

Corporate Office
Post Office Box 9095
Huntington, West Virginia 25704
Monte Gorham
304/429-6729

Midwest Regional Office
5329 Second Avenue
Des Moines, Iowa 50313
S. R. Genovese
515/244-3014

Attention-Lab Technicians and Consultants

We realize that from time to time, your company may have requests from your customers concerning the transportation and disposition of their hazardous waste. We would like to introduce our company to you and to be of service to your customers.

Mud River Trucking Inc. offers full service clean-up and transportation of hazardous waste materials to federally approved landfills. Our tractors and trailers haul only hazardous waste, in either bulk or drums, meeting or exceeding all federal and state laws governing the transportation of such products. We are classified a common carrier of a regulated product. Please note these services also apply to the transportation and disposition of PCB's.

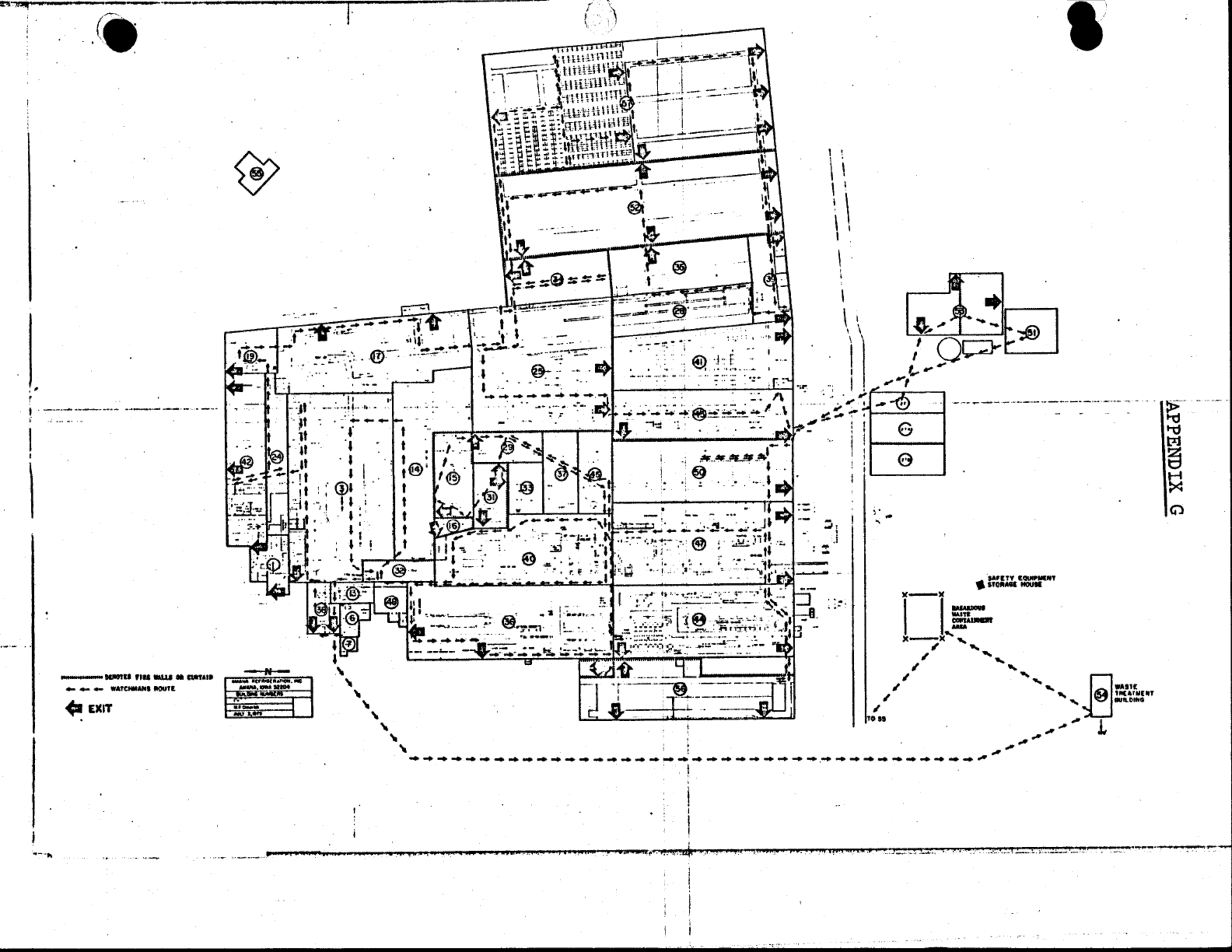
Also available are special services and equipment such as roll-off trailers, dozers, cranes, etc.

For more information please call the above midwest number.

Sincerely yours,

Bob Nelson

Steve Genovese/Bob Nelson
Midwest Representatives


DENOTES FIRE WALLS OR CURTAIN
WATCHMANS ROUTE
EXIT
N
SAFETY EQUIPMENT STORAGE HOUSE
HAZARDOUS WASTE CONTAINMENT AREA
WASTE TREATMENT BUILDING
TO 55

APPENDIX G

1-22-81

Revised 9-29-81
Revised 11-25-81

AMANA REFRIGERATION, INC.

EMERGENCY PLANS

This plan has been written to provide Emergency Instructions and information to all levels of Management in the event of an emergency such as hazardous material spills, fire, etc. It is important that any changes in exits, etc. be updated periodically. Any revision of such exits by the Plant Engineering Department shall be communicated in writing to the Occupational Safety and Health Director.

All Supervisors are to review Emergency Procedures and explain the information to their employees. Fire fighting equipment, exit aisles, etc. must be kept clear and accessible at all times.

Some years ago an Emergency Communications System was installed in the factory and offices to provide a means of informing affected employees of the Emergency and to instruct them when needed.

The location of the Communications System is in the Personnel Office. Speakers for the system are located throughout the facility and updating of this system when building additions are made or remodeling is done is the responsibility of the Plant Engineer. Refer failures in the System to the Plant Engineer also and he will contact the proper people for repair.

Testing is done on a weekly basis by the Security Department and a sample of the test procedure and report is attached. Any problems found during this test are reported to the Safety Director who will contact the Plant Engineer for repair.

FIRE AND OTHER EMERGENCY USE

If you have such an emergency situation in your department, go to the nearest phone and call 2400. Explain the type of situation you have whether fire, hazardous material spill, etc. and tell the person answering the phone the location of the problem. If reporting a spill or fire ask that the Fire Brigade be informed. Speak clearly and be sure your message has been received before hanging up. On Third Shift dial 2800 and give your message without waiting for someone to answer. Your message will automatically go out over the entire system. At this point the Emergency Coordinators are in charge and will give any needed evacuation order by voice communication or by calling the Personnel Department for broadcast over the Emergency Communications System.

HAZARDOUS MATERIAL LEAK OR SPILL

Should you have a leak or spill of hazardous material, call one of the following people:

Prime Emergency Coordinators

Robert Steif - Ext. 2265 [redacted] 1st Shift
Fritz Marz, Fire Chief - Ext. 2190 [redacted] 1st Shift

Ex. 6 PII

Alternate Coordinators:

Clarence Reihmann, Asst. Chief - Ext. 2118 [redacted] 1st Shift
Arnold Moessner, Asst. Chief - Ext. 2112 [redacted] 1st Shift
Don Mason, Asst. Chief - Ext. 2511 [redacted] 2nd Shift
Richard Vulysteke, Asst. Chief [redacted] 3rd Shift, Auto Call 6-21
Roger Volz, Captain [redacted] 2nd Shift

Ex. 6 PII

If you have determined that evacuation must take place before arrival of the above personnel, route your employees to the nearest exit and inform Personnel Department of your action. At all times remain in contact with your upper management people.

When the Coordinators arrive on the scene of hazardous material spills or a fire, then they are in charge of the effort involved.

EMERGENCY SIGNALS

The Emergency Communication Signals are as follows:

a. Steady Tone - Means an Emergency Message will follow.

b. Pulsing Tone - Means a Message for the Fire Brigade will follow.

c. Slow Warble - Means "Take Cover."

d. Siren - Means Evacuate the building or area covered by the Message.

In all cases the siganl will be followed by a voice communication to give specific details as time permits.

FIRE EMERGENCY

Supervisors are responsible to instruct and periodically review emergency procedures with their employees. This can be done at any time but must include new employees as they enter the department and also transfers. On long-time department employees, it shall be done on an annual basis or oftener and shall include:

1. Location, operation, and use of fire extinguishers.

2. Location and route to Emergency exits.

3. Emergency Shutdown of Machinery.

4. Notification of Management in case of fire, hazardous material spill or other emergency situation.

5. Should include encouraging employees to call for help even on a small fire.

FIRE BRIGADE

The Fire Brigade at Amana Refrigeration, Inc., Amana, Iowa shall consist of a minimum of 50 members and shall be distributed as follows:

Fire Chief	- 1
Assistant Chief	- 4
Captains	- 8
Firemen	-37

Shift distribution shall be as follows:

	1st Shift	2nd Shift	3rd Shift
Fire Chief	1	0	0
Assistant Chiefs	2	1	1
Captains	5	2	1
Firemen (Minimum)	21	8	8

The Fire Brigade is to be called to all fires in the facility. They are trained to fight all types of fires which may occur in the facility.

PHYSICALS

All members of the Fire Brigade shall have an annual physical by the Company Doctor to assure their physical capability of performing the duties assigned to them as a member of the Fire Brigade. No person shall be permitted to be a member of the Fire Brigade who has known heart disease, epilepsy, or emphysema unless the Company Doctor certified that they are fit to participate in these activities.

TRAINING

The Fire Chief is to make sure that all members of the Fire Brigade are properly trained commensurate with those duties they are expected to perform. Such training shall be provided to the Fire Brigade members before they perform Fire Brigade emergency activites. The quality of the training and education of the Fire Brigade members shall be similar to that of the Iowa Fire Service Extension.

The Fire Chief shall inform all Fire Brigade Members about special hazards such as storage and use of flammable liquids and gases, hazardous chemicals, and water reactive substances to which they may be exposed during fire or other emergencies. Any changes that occur in relation to the special hazards shall be communicated to the Fire Brigade Members.

Written procedures that describe the actions to be taken in situations involving the special hazards shall be included in these training sessions.

MAINTENANCE

The Maintenance Department shall maintain and inspect, at least annually, all fire fighting equipment. Portable fire extinguishers shall be inspected more frequently. Equipment which is found to be damaged or unserviceable shall be replaced immediately. Portable fire extingusihers shall be placed, used, maintained, and tested according to 1910.157 of the Occupational Safety and Health Rules.

Standpipe and hose systems shall be installed, maintained, inspected, and tested according to 1910.158 of the Occupational Safety and Health Rules.

Automatic Sprinkler Systems shall be installed, maintained, inspected, and tested according to 1910.159 of the Occupational Safety and Health Rules.

Fixed extinguishing systems shall be designed, installed, maintained, inspected, and tested according to 1910.160 of the Occupational Safety and Health Rules.

Fixed dry chemical extingishing systems shall be designed, installed, maintained, inspected, and tested according to 1910.161 of the Occupational Safety and Health Rules.

Any fire detection systems shall be constructed and installed to comply with the requirements of 1910.164 of the Occupational Safety and Health Rules.

The employee alarm system shall be maintained so that all employees may be evacuated from their work station as needed. Emergency telephone numbers shall be posted at or near all factory telephones and employees in each department shall be instructed as to their use by their supervisor.

All devices, components, combination of devices or systems constructed and installed to comply with these rules shall be restored to normal operating condition as promptly as possible after each test or use.

PROTECTIVE CLOTHING

Fire Brigade and Spill Control Members shall be provided any necessary personal protective clothing and equipment for use during plant fires at no cost to the Brigade members. Any clothing provided must meet the requirements of 1910.155 (e) of the Occupational Safety and Health Rules.

EMERGENCY EVACUATION

Supervisors are responsible to instruct and periodically review emergency evacuation procedures with their employees. This can be done at any time but shall include all employees including transfers and new hires when they enter the department. On long-time employees it shall be done at least annually and shall include the following:

1. General Foremen, Foremen, and Group Leaders shall know the route to the location of at least two separate and remote exits from the building.

2. All department personnel are to be instructed in the route to and location of exits.

3. New hires and transfers are to be instructed upon entering the department.

4. Notification of Management of such evacuation.

TO CALL FIRE BRIGADE

Use the Emergency Communication System located in the Personnel Office.

1. Push black "Office" and "All Factory" toggles to "Up" position on console.

2. Push red "Emergency Message" toggle to "Down" position. Hold this toggle at down position for at least five (5) seconds. Return to neutral position.

3. Using the desk microphone, press the black lever in the base down and give message.

   a. Speak calmly and clearly.

   b. Tell Fire Brigade the location of the emergency. Repeat message several times. Be sure you have proper location for fire or other emergency. (Fire Brigade is to be called to hazardous material spills as well as to fires.)

4. Return all switches to neutral position.

KIND OF FIRE

DECIDE THE CLASS OF FIRE YOU ARE FIGHTING. . .

. . .THEN CHECK THE COLUMNS TO THE RIGHT OF THAT CLASS

APPROVED TYPE OF EXTINGUISHER

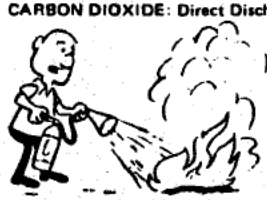
MATCH UP PROPER EXTINGUISHER WITH CLASS OF FIRE SHOWN AT LEFT

	FOAM Solution of Aluminum Sulphate and Bicarbonate of Soda	CARBON DIOXIDE Carbon Dioxide Gas Under Pressure	SODA ACID Bicarbonate of Soda Solution and Sulphuric Acid	PUMP TANK Plain Water	GAS CARTRIDGE Water Expelled by Carbon Dioxide Gas	MULTI-PURPOSE DRY CHEMICAL	ORDINARY DRY CHEMICAL
CLASS A FIRES — USE THESE EXTINGUISHERS — ORDINARY COMBUSTIBLES • WOOD • PAPER • CLOTH ETC.	A B	X	A	A	A	A B C	X
CLASS B FIRES — USE THESE EXTINGUISHERS — FLAMMABLE LIQUIDS, GREASE • GASOLINE • PAINTS • OILS, ETC.	A B	B C	X	X	X	A B C	B C
CLASS C FIRES — USE THESE EXTINGUISHERS — ELECTRICAL EQUIPMENT • MOTORS • SWITCHES ETC.	X	B C	X	X	X	A B C	B C

HOW TO OPERATE

FOAM: Don't Play Stream into the Burning Liquid. Allow Foam to Fall Lightly on Fire.

CARBON DIOXIDE: Direct Discharge as Close to Fire as Possible. First at Edge of Flames and Gradually Forward and Upward



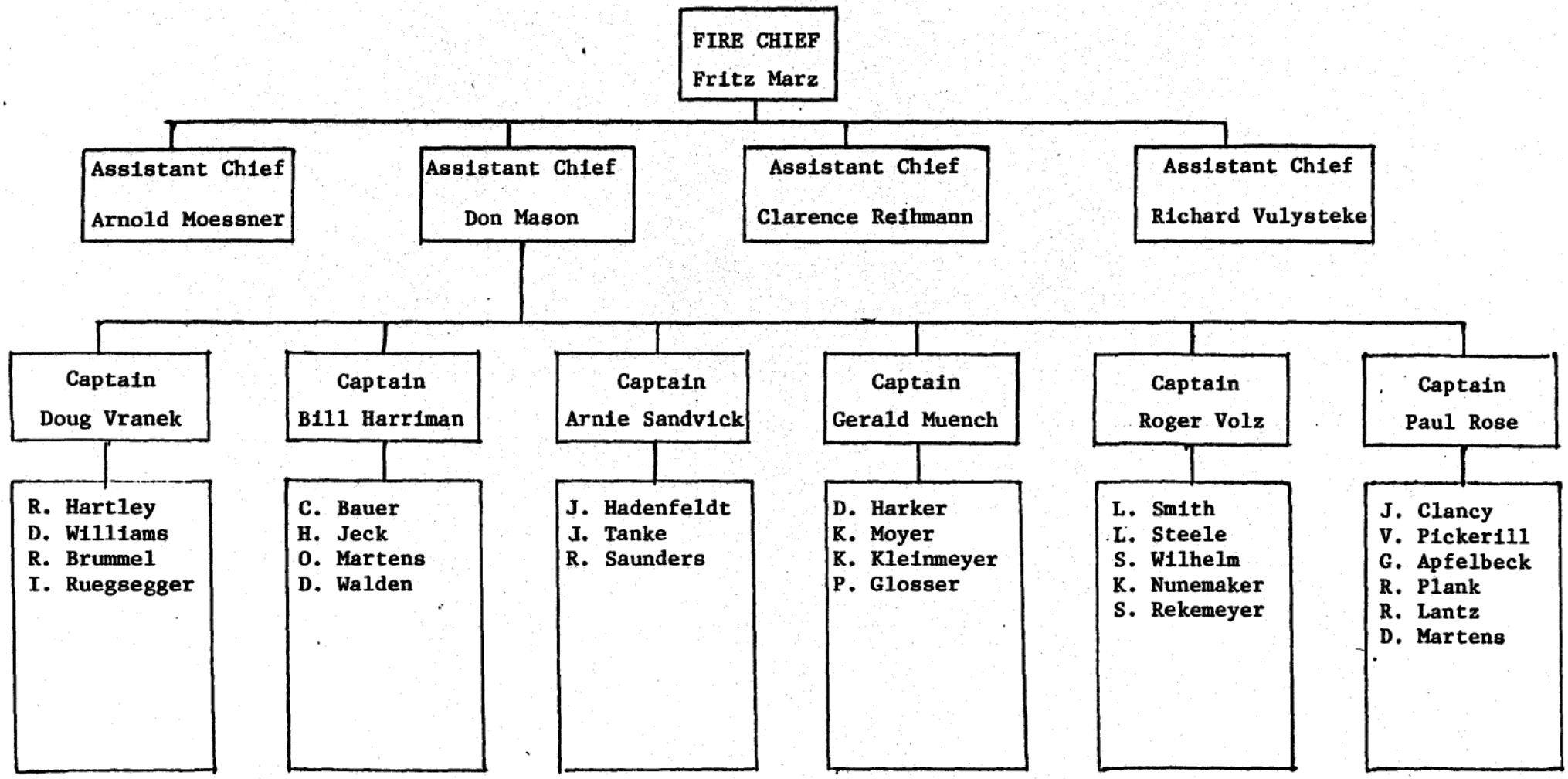
SODA-ACID, GAS CARTRIDGE: Direct Stream at Base of Flame

PUMP TANK: Place Foot on Footrest and Direct Stream at Base of Flames

DRY CHEMICAL: Direct at the Base of the Flames. In the Case of Class A Fires, Follow Up by Directing the Dry Chemicals at Remaining Material That is Burning

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

1-22-81
Revised 9-29-81
Revised 11-25-81
Revised 12-18-81



WEEKLY EMERGENCY COMMUNICATIONS SYSTEM TEST REPORT

TO TEST SYSTEM:

1. Lock the Communications System microphone in the "on" position.
2. Place the microphone near the speaker of the AM-FM radio.
3. Turn the volume of the radio up to a level at which the program may be heard during the Guard round.
4. Turn on the "Office" and "Factory" systems on the console.
5. Check the speakers during the Guard round.
6. Complete the following:

TIME:_____ DATE:_____

COMMENTS:_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

GUARD

7. Forward this report to the Safety Department.

EMERGENCY PHONE NUMBERS

Iowa County Ambulance	642-3815
Iowa County Sheriff	642-5613
Air Care(Helicopter)	
(University Of Iowa Hospital)	1-800-272-6440
Mercy Hospital (Cedar Rapids)	
Ambulance	366-7654
Helicopter	366-7654
Dr. Caraway-Office	622-3231
-Home	[redacted] Ex. 6 PII
Dr. Howell-Home Or Office	[redacted] Ex. 6 PII
Iowa Highway Patrol	396-1944
If No Answer	396-4414
Iowa County Civil Defense	642-3151
Weather	393-0500
(November Through March)	396-3330

APPENDIX I

SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN

Amana Refrigeration, Inc.
Amana, Iowa 52204
319-622-5511

CONTACT

Robert Steiff

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA AND I AM COMPETENT TO PREPARE THIS DOCUMENT.

Gene W Fitt 12-19-80

DATE

GENE R. FITCH, P.E., REG. NO. 6367

1. Name and location of facility.
   A. Amana Refrigeration, Inc., Amana, IA 52204
   B. 319-622-5511
   C. Normal hours of operation, 7 a.m. - 12:00 p.m., Monday - Friday.
   D.
      Robert Steiff, Coordinator

2. Description of facility. Consists of a plant engaged in the production of refrigerators, freezers, microwave ovens. Oil storage tank area follows:
   A. 2 tanks of 30,000 gal. cap. - underground. Location is directly adjacent to the south wall of boiler room. All are used for No. 2 fuel oil.
   B. 2 - 25,000 gal. tanks - underground. The location is west of the NW corner of Building 36. Used for No. 2 fuel oil.
   C. 1 - 1000 gal. tank - above ground. A former L.P.G. tank east of industrial waste treatment building No. 54. Tank contains diesel fuel.
   D. 1 - 9000 gal. tank - verticle above ground. Located east of steel unloading dock. Tank contains compressor oil.

   The accompanying site plan shows plant layout and storage tanks. Also are specs. on all containment areas.

3. Spill prevention and containment areas.
   A. Containment area drain valves will be closed at all times where tanks are above ground.
   B. Containment drain valve will be closed during filling of underground tanks.
   C. All main unloading valves will be locked shut when unattended.
   D. Venting capacity is suitable for the filling rate.
   E. Each containment area will hold the single largest above ground vessel in the area.
   F. For underground storage tanks, the containment area has a capacity greater than the tanker delivering the fuel
   G. All on site construction equipment, pump, etc. will be used to control any spills.

4. Personnel: All personnel have been instructed in the following spill prevention and counter measure plans.
   A. All tanks are to be checked for capacity prior to being filled.
      1. Boiler personnel will be in charge of all tanks located by the boiler room.
      2. Waste Treatment personnel will inspect the diesel tank by the treatment building.
      3. Refrigeration technician on duty will be in charge with inspection of the compressor oil containment area.
      4. All responsible personnel will notify the following people in case of a spill.
         a. Robert Steiff - Business - 2265
         [redacted] Ex. 6 PII

5. Housekeeping procedures including clean-up of small spills, are to be observed to prevent contamination of drainage water ways.

6. Intermediate spills will be pumped into drums and sent for disposal.
7. All large volumn spills will be pumped into an alternate tank truck. The proper disposal of the oil will be determined after clean-up.
8. All oil that remains on the concrete will be absorbed by sawdust or floor dry, then put into 17H drums for disposal.
9. In the areas of above ground storage tanks, the containment area discharge valves will normally be in the closed position. Impounded surface water will be checked for contamination prior to release. Following release, the valve will again be placed in the normal or closed position. Adequate records of each discharge will be maintained.

5. Notification
Notification of any discharges which occur will be made to the appropriate agencies in accordance with 33 CFR, Part 153, Subpart B. Records of discharges will be maintained.

6. Inspections
Periodic inspections of the storage areas will be made to identify leaks or potential for spills. When problems are observed, corrective action will be taken. A record of these inspections and any corrective action taken will be maintained.

NOTE: AS oil is not a hazardous waste as of 2/25/81. Step No. 8 of the clean-up counter measure will be changed to: Dispose all sawdust or floor dry by putting it into the dry waste compactor box.

(9014G)

Subpart B - Notice of the Discharge of Oil or a Hazardous Substance.

(9014H)

153.201 Purpose.

The purpose of this subpart is to prescribe the manner in which the notice required in section 311 (b) (5) of the Act is to be given and to list the government officials to receive that notice.

Note: The notice required in this subpart is in addition to the notice required in 46 CFR 2.20-65 which requires notice to the Coast Guard of certain hazardous materials incidents.

(9014I)

153.203 Procedure for the notice of discharge.

(a) Before January 1, 1977, any person in charge of a vessel or an onshore or offshore facility shall, as soon as he has knowledge of any discharge of oil or a hazardous substance from that vessel or facility in violation of section 311 (b) (3) of the Act, immediately notify by telephone, radio telecommunication or a similar means of rapid communication one of the following persons:

(1) Duty Officer, National Response Center, U.S. Coast Guard, 400 Seventh Street, SW, Washington, D.C. 20590, toll free telephone number 800-424-8802.

(2) The government official predesignated in the applicable Regional Contingency Plan as the On-Scene Coordinator for the geographic area in which the discharge occurs.

NOTE: Regional Contingency Plans are available at Coast Guard District Offices and Environmental Protection Agency (EPA) Regional Offices, as indicated in Table 2. Coast Guard District Office and EPA Regional Office addresses are listed in Table 1.

(3) Commanding Officer or Office-in Charge of any Coast Guard unit in the vicinity of the discharge, or in the case of a discharge into the Panama Canal Zone, the Marine Traffic Control in Cristobal or Balboa.

(4) Commander of the Coast Guard district in which the discharge occurs.

NOTE: Coast Guard Districts and corresponding states may be found in Part 3 of this Chapter.

(b) After December 31, 1976, any person in charge of a vessel or an onshore or offshore facility shall, as soon as he has knowledge of any discharge of oil or a hazardous substance from that vessel or facility in violation of section 311(b)(3) of the Act, immediately notify by telephone, radio telecommunication, or a similar means of rapid communication the official designated in paragraph (a)(1) of this section, except as prescribed in paragraph (c) and (d) of this section.

(c) If after December 31, 1976, to give notice as prescribed in paragraph (b) of this section is impractical, notice may be given to the officials listed in paragraphs (a)(2) through (a)(4) of this section in order of priority.

(d) After December 31, 1976 any person in charge of a vessel or an onshore or offshore facility shall, as soon as he has knowledge of any discharge of oil or a hazardous substance occurring in Alaska or Hawaii from that vessel or facility in violation of section 311(b)(3) of the Act, immediately notify by telephone, radio telecommunications, or a similar means of rapid communications any of the officials listed in paragraphs (a)(2) through (a)(4) of this section.

[¶9014J]

§ 153.205 Fines.

Section 311(b)(5) of the Act prescribes that any person who fails to notify the appropriate agency of the United States Government immediately of a discharge is, upon conviction, subject to a fine of not more than $10,000, or to imprisonment of not more than one year, or both.

TABLE 1.—*Addresses and telephone numbers of Coast Guard district offices and EPA regional offices*

	Address	Telephone
EPA REGIONAL OFFICES		
Region:		
I.....	Room 2303, John F. Kennedy, Federal Bldg., Boston, Mass. 02203.	617-223-7265
II.....	Room 908, 26 Federal Plaza, New York, N.Y. 10007.	201-548-8730
III.....	Curtis Bldg., 6th and Walnut Sts., Philadelphia, Pa. 19106.	215-597-0898
IV.....	1421 Peachtree St. NE., Atlanta, Ga. 30309.	404-526-5062
V.....	230 S. Dearborn Ave., Chicago, Ill. 60604.	312-886-7591
VI.....	Suite 1600, 1600 Patterson St., Dallas, Tex. 75201.	214-749-3840
VII.....	1735 Baltimore Ave., Kansas City, Mo. 64108.	816-374-3778
VIII.....	Suite 900, 1860 Lincoln St., Denver, Colo. 80203.	303-837-3880
IX.....	100 California St., San Francisco, Calif. 94111.	415-556-6254
X.....	1200 6th Ave., Seattle, Wash. 98101.	206-442-1200
COAST GUARD DISTRICT OFFICES		
District:		
1st.....	150 Causeway St., Boston, Mass. 02114.	617-223-3644
2d.....	Federal Bldg., 1520 Market St., St. Louis, Mo. 63101.	314-622-4614
3d.....	Governors Island, New York, N.Y. 10004.	212-264-4800
5th.....	Federal Bldg., 431 Crawford St., Portsmouth, Va. 23705.	703-393-9611
7th.....	Room 1018, Federal Bldg., 51 Southwest 1st Ave., Miami, Fla. 33130.	305-350-5611
8th.....	Customhouse, New Orleans, La. 70130.	504-527-6225
9th.....	1240 East 9th St., Cleveland, Ohio 44199.	216-522-3983
11th.....	Heartwell Bldg., 19 Pine Ave., Long Beach, Calif. 90802.	213-590-2311
12th.....	630 Sansome St., San Francisco, Calif. 94126.	415-556-5500
13th.....	618 2nd Ave., Seattle, Wash. 98104.	206-524-2902
14th.....	677 Ala Moana Blvd., Honolulu, Hawaii 96813.	808-546-7109
17th.....	P.O. Box 3-5000, Juneau, Alaska 99801.	907-586-7340

TABLE 2—STANDARD ADMINISTRATIVE REGIONS OF STATES AND CORRESPONDING COAST GUARD DISTRICTS AND EPA REGIONS

States and EPA region:	*Coast Guard district*—
Region I:	
Maine	1
New Hampshire	1
Vermont	1
Massachusetts	1
Connecticut	3
Rhode Island	1
Region II:	
New York:	
Coastal area	3
Great Lakes area	9
New Jersey	3
Puerto Rico	7
Virgin Islands	7

[The next page is 9465-7.]

States and EPA region:	Coast Guard district—
Region III:	
Pennsylvania:	
East coast	3
Lakeside	9
Maryland	5
Delaware	3
West Virginia	2
Virginia	5
District of Columbia	5
Region IV:	
Kentucky	2
Tennessee	2
North Carolina	5
South Carolina	[1]7
Georgia	7
Florida	7
Atlantic and Gulf coasts	7
Panhandle	8
Alabama	8
Mississippi	8
Canal Zone	7
Region V:	
Minnesota	[1]9
Wisconsin	9
Michigan	9
Illinois	9
Indiana	9
Ohio	9
Region VI:	
New Mexico	8
Texas	[1]8
Oklahoma	2
Arkansas	2
Louisiana	8
Region VII:	
Nebraska	2
Iowa	2
Kansas	2
Missouri	2
Region VIII:	
Montana	13
Wyoming	2
Utah	12
Colorado	2
North Dakota	2
South Dakota	2
Region IX:	
California:	
Northern	[1]12
Southern	11
Nevada	12
Arizona	11
Hawaii	14
Guam	14
American Samoa	14
Trust Territories of the Pacific	14
Region X:	
Washington	[1]13
Oregon	13
Idaho	13
Alaska	17

[1] Coastal plans for standard regions are available for public inspection.

[¶9014M]

Subpart C—Removal of Discharged Oil

[¶9014N]

§ 153.301 Purpose.

The purpose of this subpart is to prescribe methods and procedures to be used to remove discharges of oil from coastal waters.

[¶9014O]

§ 153.303 Applicability.

The provisions of this subpart apply to any owner or operator of a vessel or onshore or offshore facility from which a discharge of oil into coastal waters occurs who acts to remove or arranges for the removal of such discharges.

[¶9014P]

§ 153.305 Methods and Procedures for the Removal of Discharged Oil.

Each person who removes or arranges for the removal of a discharge of oil from coastal waters shall—

(a) Use to the maximum extent possible mechanical methods and sorbents that—

(1) Most effectively expedite removal of the discharged oil; and

(2) Minimize secondary pollution from the removal operations;

NOTE: The Federal OSC is authorized by the provisions of the National Contingency Plan to require or deny the use of specific mechanical methods and sorbents. Sorbent selection considerations of the OSC include hydrographic and meteorological conditions, characteristics of the sorbent, and availability of a mechanical method for containment and recovery.

(b) Control the source of discharge, prevent further discharges, and halt or slow the spread of the discharge by mechanical methods or sorbents or both to the maximum extent possible;

(c) Recover the discharged oil from the water or adjoining shorelines by mechanical or manual methods or both to the maximum extent possible;

(d) Use chemical agents only in accordance with the provisions of Annex X of the National Contingency Plan and with the prior approval of the Federal OSC; and

(e) Dispose of recovered oil and oil contaminated materials in accordance with applicable State and local government procedures.

CONTAINMENT INSPECTION AND DISCHARGE REPORT

DATE: _____ CONTAINMENT LOCATION: _____

LEAKAGE OBSERVED: ___ YES ___ NO DISCHARGE OBSERVED: ___ YES ___ NO

OPERATION OF CONTAINMENT VALVE: _____

_____

If leak observed, corrective action taken: _____

_____

_____

If spill observed, corrective action taken: _____

_____

_____

If discharge observed, corrective action taken: _____

_____

_____

Notification of Agencies in event of discharge:

DEQ: NAME _____ DATE & TIME _____

EPA: NAME _____ DATE & TIME _____

USCG: NAME _____ DATE & TIME _____

Other observations and remarks: _____

_____

_____

_____
Inspection made by

NOTIFICATION NUMBERS:

EPA - 816-374-3778

IOWA DEQ - 515-281-8694

U.S.C.G. - 800-424-8802

CHEMTREC - 800-424-9300

Robert Steiff - [redacted] Ex. 6 PII

Fire Department - 622-3333

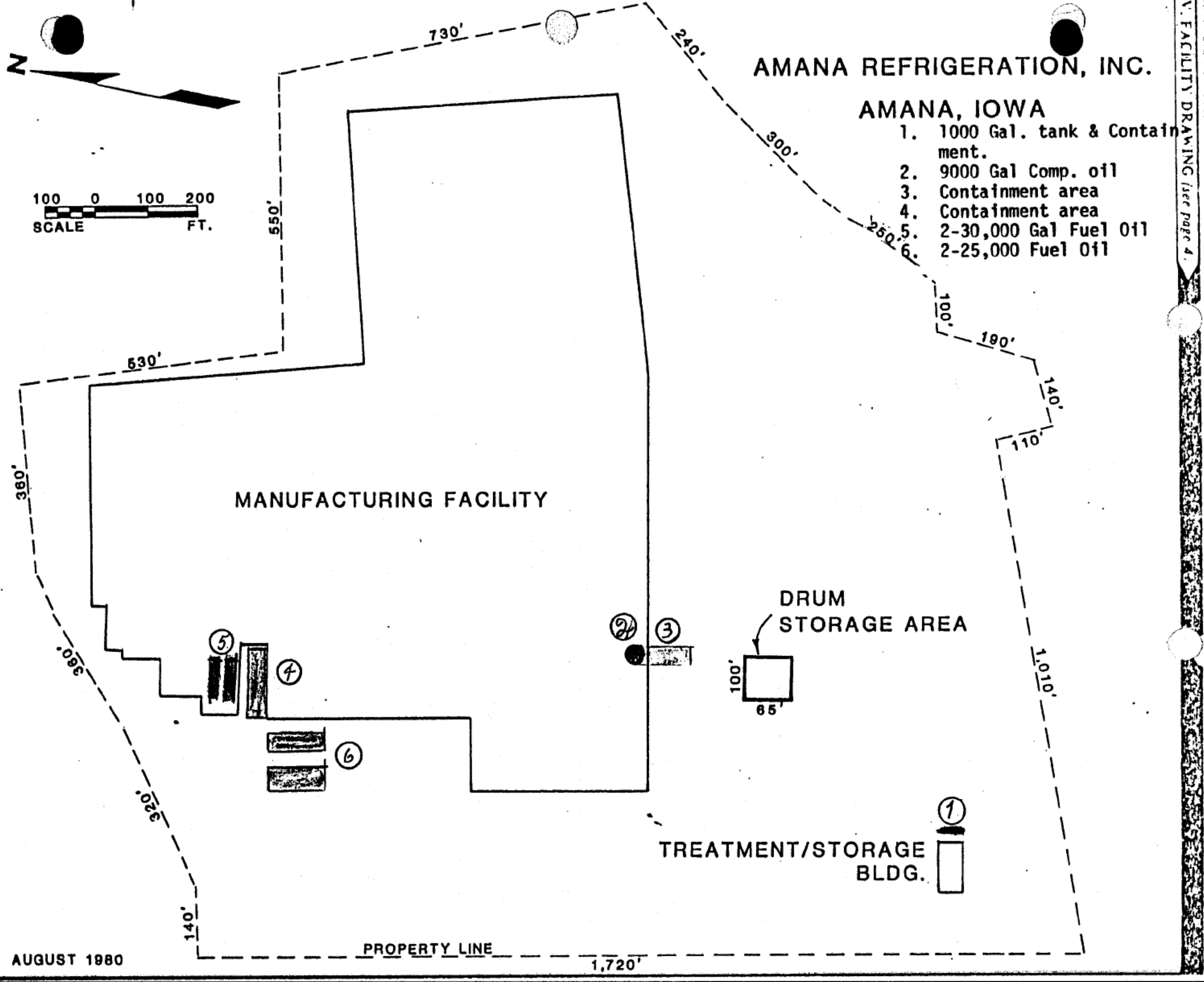
Iowa County Sheriff - 642-5613

AMANA REFRIGERATION, INC.

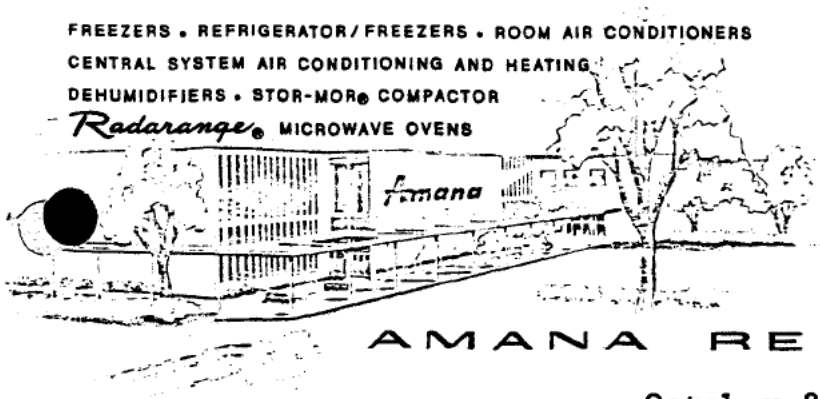
AMANA, IOWA

1. 1000 Gal. tank & Containment.
2. 9000 Gal Comp. oil
3. Containment area
4. Containment area
5. 2-30,000 Gal Fuel Oil
6. 2-25,000 Fuel Oil

V. FACILITY DRAWING (see page 4.)



AUGUST 1980



AMANA REFRIGERATION, INC.

October 28, 1981

AMANA, IOWA 52204

Mr. Robert M. Sayre
Iowa Department of Environmental Quality
Regional Office #6
117 N. 2nd Avenue, P.O. Box 27
Washington, Iowa 52353

Dear Mr. Sayre:

Enclosed you will find a copy of our Hazardous Waste Plan consisting of the Contingency Plan and Appendix A - J. Also enclosed is a scale print of Appendix B & G; Appendix I is our oil S.P.C.C. Plan.

Included also is our Waste Analysis Plan. The analysis and back-up for this plan will be kept on file in the Hazardous Waste Treatment Facility.

We are also enclosing the Closure Plan which includes Plan for Financial Assurance for Closure and Liability Insurance. These will be implemented by EPA's effective date. The specimens of Job Titles showing required training and training records; - these forms will be kept on file at the Waste Treatment Facility.

Enclosed also are copies of the Operating Records (daily, monthly, yearly) and Inspection Reports (daily, weekly, monthly).

Records will be readily available in our Waste Treatment Facility. Should you have any questions, please contact me at Amana Refrigeration, Inc., (319) 622-5511, Extension 2171.

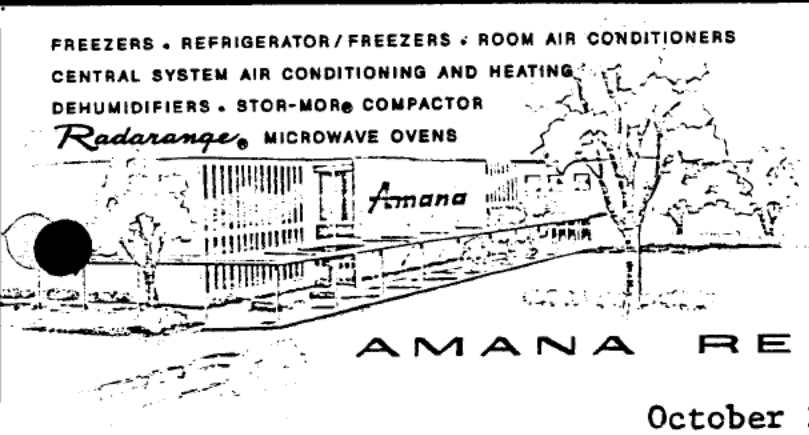
Sincerely,

AMANA REFRIGERATION, INC.

Leonard Rettig
Chief Engineer-Construction
& Hazardous Waste Coordinator

LR:rmt

cc: Mr. Ronald Kolpa



AMANA REFRIGERATION, INC.

October 28, 1981 AMANA, IOWA 52204

Mr. Ronald L. Kolpa
Dept. of Environmental Quality
Henry A. Wallace Building
900 East Grand
Des Moines, Iowa 50319

Dear Mr. Kolpa:

To comply with CFR 40, 265.51-55, it becomes necessary to amend our contingency plan. Enclosed you will find an amended contingency plan for Amana Refrigeration, Inc.

The enclosed contingency plan replaces the previous one which was sent to you earlier. Whether you do or do not desire to provide the assistance in the plan, please indicate your intentions in writing to the undersigned. Your cooperation will be greatly appreciated.

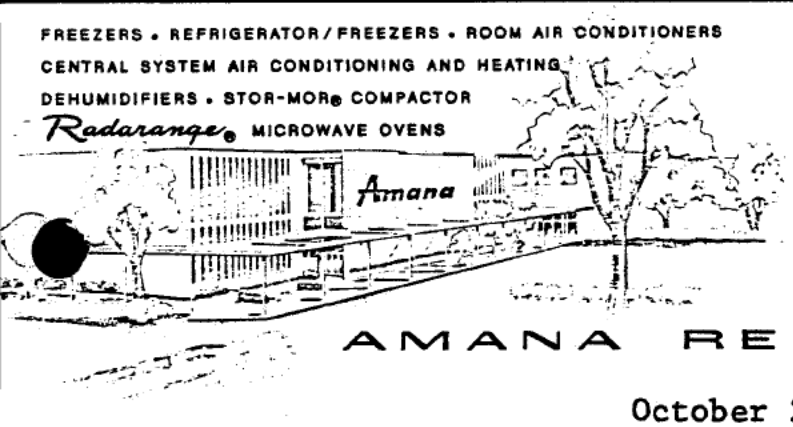
Sincerely,

AMANA REFRIGERATION, INC.

Leonard Rettig
Chief Engineer-Construction
& Hazardous Waste Coordinator

Enclosure
LR:rmt

Backed by a Century-Old Tradition of Fine Craftsmanship



AMANA REFRIGERATION, INC.

October 28, 1981 AMANA, IOWA 52204

D.E.Q. Regional Office
Region # 6
Washington, Iowa 52353

Gentlemen:

To comply with CFR 40, 265.51-55, it becomes necessary to amend our contingency plan. Enclosed you will find an amended contingency plan for Amana Refrigeration, Inc.

The enclosed contingency plan replaces the previous one which was sent to you earlier. Whether you do or do not desire to provide the assistance in the plan, please indicate your intentions in writing to the undersigned. Your cooperation will be greatly appreciated.

Sincerely,

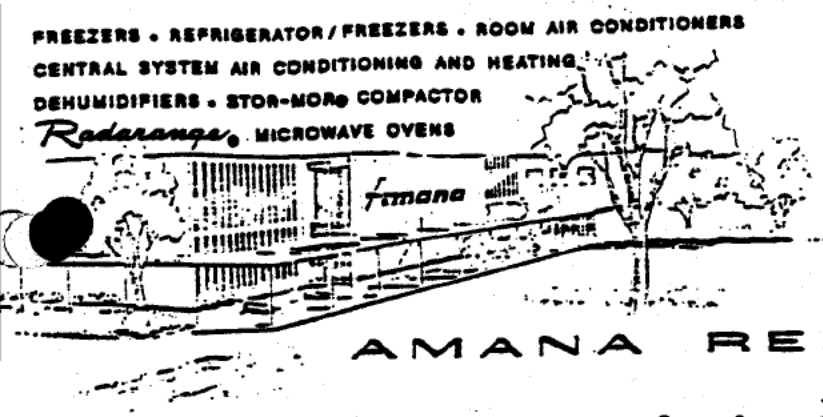
AMANA REFRIGERATION, INC.

Leonard Rettig

Leonard Rettig
Chief Engineer-Construction
& Hazardous Waste Coordinator

Enclosure
LR:rmt

Backed by a Century-Old Tradition of Fine Craftsmanship



APPENDIX J

AMANA REFRIGERATION, INC.

AMANA, IOWA 52204

October 28, 1981

Mr. Dean Henny
Homestead Fire Chief
Homestead, Iowa 52236

Dear Mr. Henny:

To comply with CFR 40, 265.51-55, it becomes necessary to amend our contingency plan. Enclosed you will find an amended contingency plan for Amana Refrigeration, Inc.

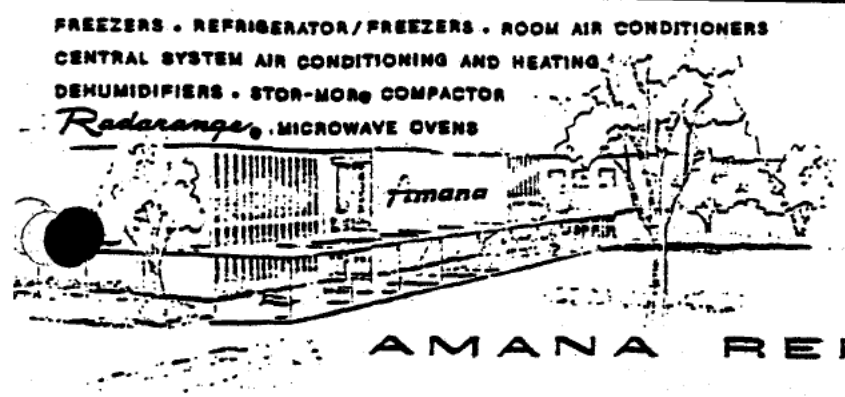
The enclosed contingency plan replaces the previous one which was sent to you earlier. Whether you do or do not desire to provide the assistance in the plan, please indicate your intentions in writing to the undersigned. Your cooperation will be greatly appreciated.

Sincerely,

AMANA REFRIGERATION, INC.

Leonard Rettig
Chief Engineer-Construction
& Hazardous Waste Coordinator

Enclosure
LR:rmt



APPENDIX J

AMANA REFRIGERATION, INC.

AMANA, IOWA 52204

October 28, 1981

Mr. Russell Ehrman
South Amana Fire Chief
South Amana, Iowa 52334

Dear Mr. Ehrmann:

Current Federal Regulations require all generators of hazardous waste to familiarize local Fire Departments with facility lay-outs, properties of hazardous wastes, evacuation routes, etc., so that if assistance is necessary it will be accomplished in a coordinated manner.

As our facility is a generator of hazardous wastes and we have identified ourselves as such to the proper Federal and/or State agencies, we are required to comply with these notification obligations.

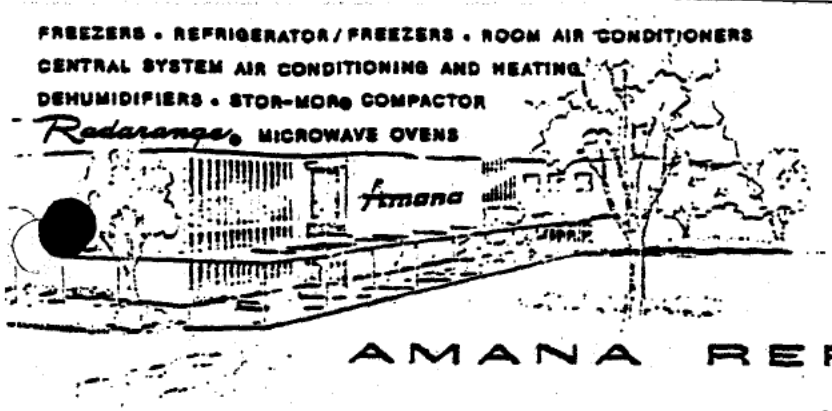
Would you please contact the writer at your convenience so that arrangements can be made to properly address our obligations concerning this issue.

Sincerely,

AMANA REFRIGERATION, INC.

Leonard Rettig
Chief Engineer-Construction
& Hazardous Waste Coordinator

LR:rmt



APPENDIX J

AMANA REFRIGERATION, INC.

October 28, 1981 AMANA, IOWA 52204

Mr. Russell Ehrman
South Amana Fire Chief
South Amana, Iowa 52334

Dear Mr. Ehrman:

To comply with CRF 40, 265.51-55, it becomes necessary to amend our contingency plan. Enclosed you will find an amended contingency plan for Amana Refrigeration, Inc.

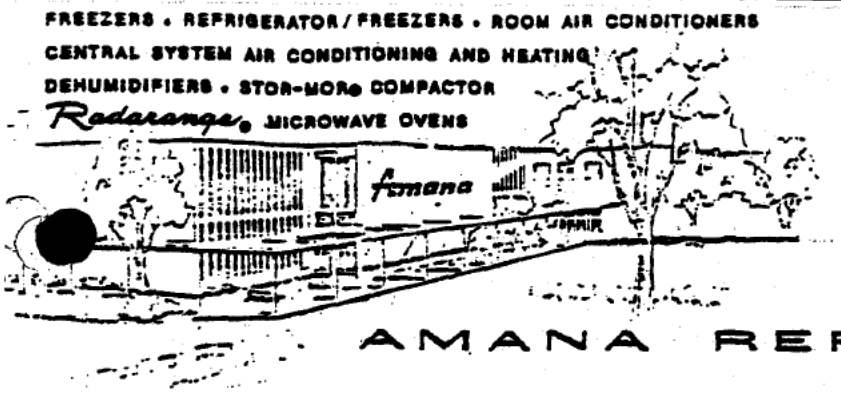
The enclosed contingency plan replaces the previous one which was sent to you earlier. Whether you do or do not desire to provide the assistance in the plan, please indicate your intentions in writing to the undersigned. Your cooperation will be greatly appreciated.

Sincerely,

AMANA REFRIGERATION, INC.

Leonard Rettig
Chief Engineer-Construction
& Hazardous Waste Coordinator

Enclosure
LR:rmt



APPENDIX J

AMANA REFRIGERATION, INC.

October 28, 1981

AMANA, IOWA 52204

Mr. Raymond Oehl
Main Amana Fire Chief
Amana, Iowa 52203

Dear Mr. Oehl:

Current Federal Regulations require all generators of hazardous waste to familiarize local Fire Departments with facility lay-outs, properties of hazardous wastes, evacuation routes, etc., so that if assistance is necessary it will be accomplished in a coordinated manner.

As our facility is a generator of hazardous wastes and we have identified ourselves as such to the proper Federal and/or State agencies, we are required to comply with these notification obligations.

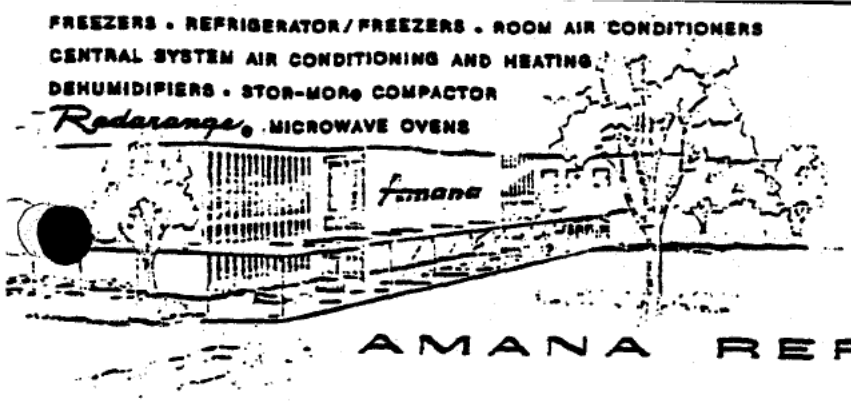
Would you please contact the writer at your convenience so that arrangements can be made to properly address our obligations concerning this issue.

Sincerely,

AMANA REFRIGERATION, INC.

Leonard Rettig
Chief Engineer-Construction
& Hazardous Waste Coordinator

LR:rmt



APPENDIX J

AMANA REFRIGERATION, INC.

October 28, 1981 AMANA, IOWA 52204

Mr. Raymond Oehl
Main Amana Fire Chief
Amana, Iowa 52203

Dear Mr. Oehl:

To comply with CFR 40, 265.51-55, it becomes necessary to amend our contingency plan. Enclosed you will find an amended contingency plan for Amana Refrigeration, Inc.

The enclosed contingency plan replaces the previous one which was sent to you earlier. Whether you do or do not desire to provide the assistance in the plan, please indicate your intentions in writing to the undersigned. Your cooperation will be greatly appreciated.

Sincerely,

AMANA REFRIGERATION, INC.

Leonard Rettig
Chief Engineer-Construction
& Hazardous Waste Coordinator

Enclosure
LR:rmt

FREEZERS • REFRIGERATOR/FREEZERS • ROOM AIR CONDITIONERS
CENTRAL SYSTEM AIR CONDITIONING AND HEATING
DEHUMIDIFIERS • STOR-MOR® COMPACTOR
Radarange® MICROWAVE OVENS

APPENDIX J

AMANA REFRIGERATION, INC.

AMANA, IOWA 52204

October 28, 1981

Mr. Leroy Trumpold
Middle Amana Fire Chief
Middle, Iowa 52307

Dear Mr. Trumpold:

Current Federal Regulations require all generators of hazardous waste to familiarize local Fire Departments with facility lay-outs, properties of hazardous wastes, evacuation routes, etc., so that if assistance is necessary it will be accomplished in a coordinated manner.

As our facility is a generator of hazardous wastes and we have identified ourselves as such to the proper Federal and/or State agencies, we are required to comply with these notification obligations.

Would you please contact the writer at your convenience so that arrangements can be made to properly address our obligations concerning this issue.

Sincerely,

AMANA REFRIGERATION, INC.

Leonard Rettig
Chief Engineer-Construction
& Hazardous Waste Coordinator

LR:rmt

FREEZERS • REFRIGERATOR/FREEZERS • ROOM AIR CONDITIONERS
CENTRAL SYSTEM AIR CONDITIONING AND HEATING
DEHUMIDIFIERS • STOR-MOR® COMPACTOR
Radarange® MICROWAVE OVENS

APPENDIX J

AMANA REFRIGERATION, INC.

AMANA, IOWA 52204

October 28, 1981

Mr. Leroy Trumpold
Middle Amana Fire Chief
Middle, Iowa 52307

Dear Mr. Trumpold:

To comply with CFR 40, 265.51-55, it becomes necessary to amend our contingency plan. Enclosed you will find an amended contingency plan for Amana Refrigeration, Inc.

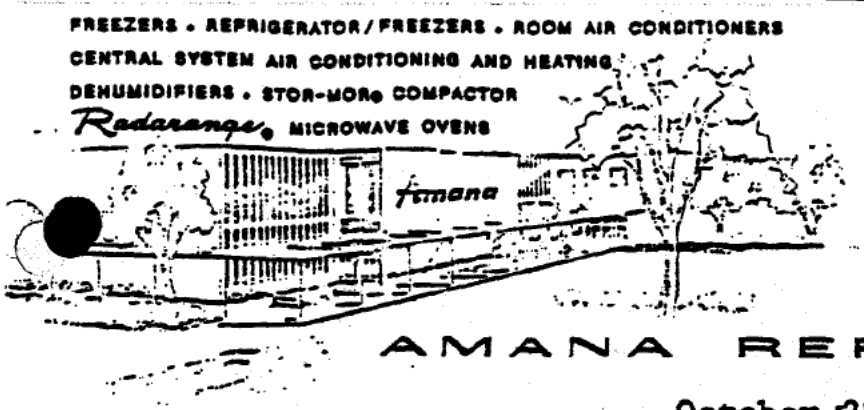
The enclosed contingency plan replaces the previous one which was sent to you earlier. Whether you do or do not desire to provide the assistance in the plan, please indicate your intentions in writing to the undersigned. Your cooperation will be greatly appreciated.

Sincerely,

AMANA REFRIGERATION, INC.

Leonard Rettig
Chief Engineer-Construction
& Hazardous Waste Coordinator

Enclosure
LR:rmt



APPENDIX J

AMANA REFRIGERATION, INC.

October 28, 1981

AMANA, IOWA 52204

Dr. L. D. Caraway
Amana Medical Clinic
Amana, Iowa 52203

Dear Dr. Caraway:

Current Federal Regulations require all generators of hazardous waste to familiarize local medical clinics with the properties of such materials handled at their facility and the types of illnesses or injuries which could result from fires, explosion or releases involving industrial wastes.

As our facility is a generator of hazardous wastes and we have identified ourselves as such to the proper Federal and/or State agencies, we are required to comply with these notification obligations.

Since the information required to properly meet this obligation does not easily lend itself to written communication, it would seem appropriate to arrange a meeting to assess how to properly respond to these requirements.

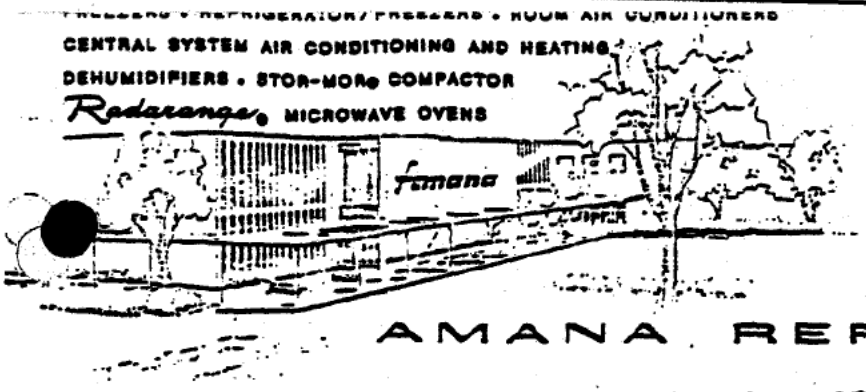
Would you please contact the writer concerning this subject so that an effective arrangement can be achieved.

Sincerely,

AMANA REFRIGERATION, INC.

Leonard Rettig
Chief Engineer-Construction
& Hazardous Waste Coordinator

LR:rmt



APPENDIX J

AMANA REFRIGERATION, INC.

October 28, 1981

AMANA, IOWA 52204

Dr. L. D. Caraway
Amana Medical Clinic
Amana, Iowa 52203

Dear Dr. Caraway:

To comply with CFR 40, 265.51-55, it becomes necessary to amend our contingency plan. Enclosed you will find an amended contingency plan for Amana Refrigeration, Inc.

The enclosed contingency plan replaces the previous one which was sent to you earlier. Whether you do or do not desire to provide the assistance in the plan, please indicate your intentions in writing to the undersigned. Your cooperation will be greatly appreciated.

Sincerely,

AMANA REFRIGERATION, INC.

Leonard Rettig
Chief Engineer-Construction
& Hazardous Waste Coordinator

Enclosure
LR:rmt

FREEZERS • REFRIGERATOR/FREEZERS • ROOM AIR CONDITIONERS
CENTRAL SYSTEM AIR CONDITIONING AND HEATING
DEHUMIDIFIERS • STOR-MOR® COMPACTOR
Radarange® MICROWAVE OVENS

APPENDIX J

AMANA REFRIGERATION, INC.

AMANA, IOWA 52204

October 28, 1981

Mr. Jim Slockett
Sheriff - Iowa County
Marengo, Iowa 52301

Dear Mr. Slockett:

Current Federal Regulations require all generators of hazardous waste to familiarize local Sheriff Departments with facility layouts, properties of hazardous wastes, evacuation routes, etc., so that if assistance is necessary it will be accomplished in a coordinated manner.

As our facility is a generator of hazardous wastes and we have identified ourselves as such to the proper Federal and/or State agencies, we are required to comply with these notification obligations.

Would you please contact the writer at your convenience so that arrangements can be made to properly address our obligations concerning this issue.

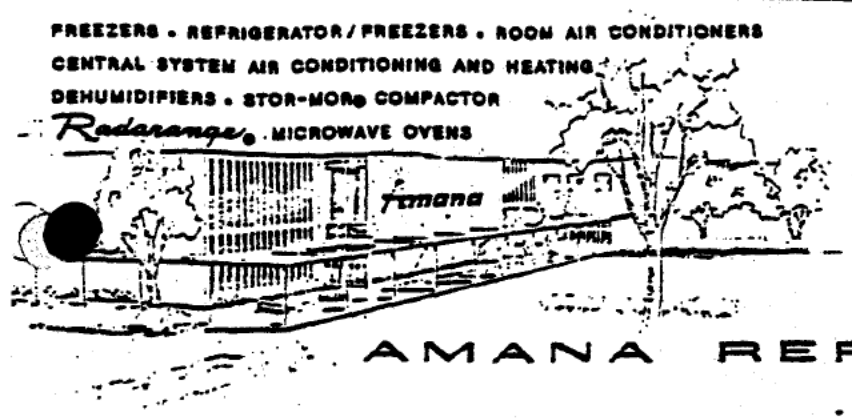
Sincerely,

AMANA REFRIGERATION, INC.

Leonard Rettig
Chief Engineer-Construction
& Hazardous Waste Coordinator

LR:rmt

Fine Craftsmanshi



APPENDIX J

AMANA REFRIGERATION, INC.

October 28, 1981

AMANA, IOWA 52204

Mr. Jim Slockett
Sheriff - Iowa County
Marengo, Iowa 52301

Dear Mr. Slockett:

To comply with CFR 40, 265.51-55, it becomes necessary to amend our contingency plan. Enclosed you will find an amended contingency plan for Amana Refrigeration, Inc.

The enclosed contingency plan replaces the previous one which was sent to you earlier. Whether you do or do not desire to provide the assistance in the plan, please indicate your intentions in writing to the undersigned. Your cooperation will be greatly appreciated.

Sincerely,

AMANA REFRIGERATION, INC.

Leonard Rettig
Chief Engineer-Construction
& Hazardous Waste Coordinator

Enclosure
LR:rmt

FREEZERS . REFRIGERATOR/FREEZERS . ROOM AIR CONDITIONERS
CENTRAL SYSTEM AIR CONDITIONING AND HEATING
DEHUMIDIFIERS . STOR-MOR® COMPACTOR
Radarange® MICROWAVE OVENS

AMANA REFRIGERATION, INC.

AMANA, IOWA 52204

October 28, 1981

D.E.Q. Regional Office
Region # 6
Washington, Iowa 52353

Gentlemen:

To comply with CFR 40, 265.51-55, it becomes necessary to amend our contingency plan. Enclosed you will find an amended contingency plan for Amana Refrigeration, Inc.

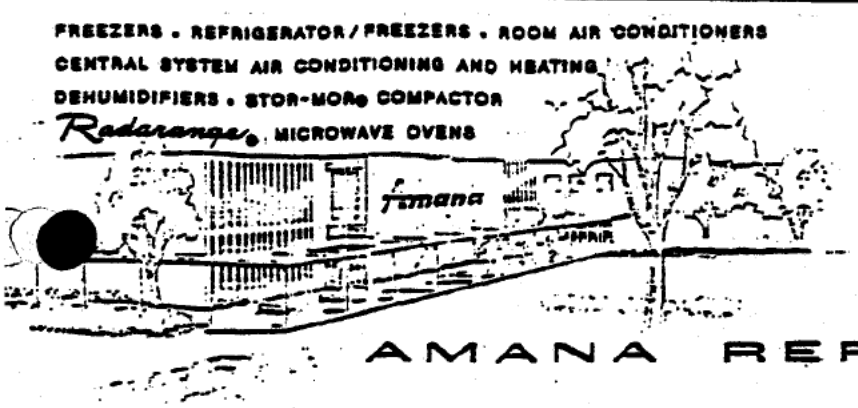
The enclosed contingency plan replaces the previous one which was sent to you earlier. Whether you do or do not desire to provide the assistance in the plan, please indicate your intentions in writing to the undersigned. Your cooperation will be greatly appreciated.

Sincerely,

AMANA REFRIGERATION, INC.

Leonard Rettig
Chief Engineer-Construction
& Hazardous Waste Coordinator

Enclosure
LR:rmt



APPENDIX J

AMANA REFRIGERATION, INC.

October 28, 1981 AMANA, IOWA 52204

Mr. Ronald L. Kolpa
Dept. of Environmental Quality
Henry A. Wallace Building
900 East Grand
Des Moines, Iowa 50319

Dear Mr. Kolpa:

To comply with CFR 40, 265.51-55, it becomes necessary to amend our contingency plan. Enclosed you will find an amended contingency plan for Amana Refrigeration, Inc.

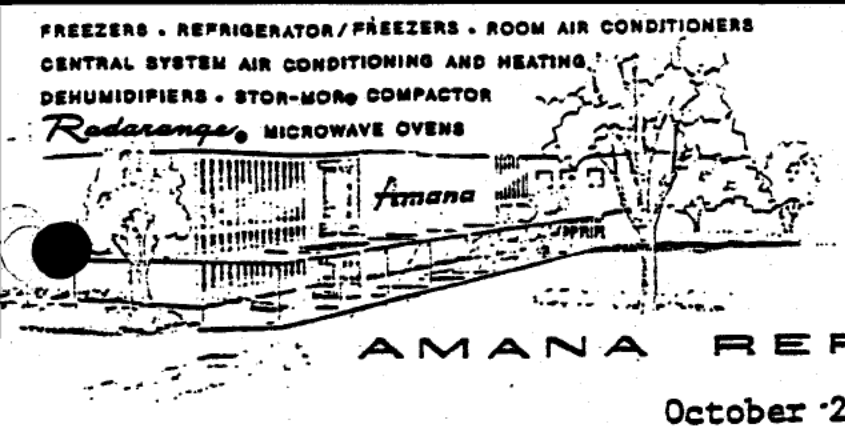
The enclosed contingency plan replaces the previous one which was sent to you earlier. Whether you do or do not desire to provide the assistance in the plan, please indicate your intentions in writing to the undersigned. Your cooperation will be greatly appreciated.

Sincerely,

AMANA REFRIGERATION, INC.

Leonard Rettig
Chief Engineer-Construction
& Hazardous Waste Coordinator

Enclosure
LR:rmt



APPENDIX J

AMANA REFRIGERATION, INC.

October 28, 1981

AMANA, IOWA 52204

Director - Iowa County Civil Defense
Marengo, Iowa 52301

Dear Sir:

To comply with CFR 40, 265.51-55, it becomes necessary to amend our contingency plan. Enclosed you will find an amended contingency plan for Amana Refrigeration, Inc.

The enclosed contingency plan replaces the previous one which was sent to you earlier. Whether you do or do not desire to provide the assistance in the plan, please indicate your intentions in writing to the undersigned. Your cooperation will be greatly appreciated.

Sincerely,

AMANA REFRIGERATION, INC.

Leonard Rettig
Chief Engineer-Construction
& Hazardous Waste Coordinator

Enclosure
LR:rmt

HAZARDOUS WASTE PERSONNEL JOB DESCRIPTIONS AND TRAINING REQUIREMENTS

F O R

AMANA REFRIGERATION, INC.
FIRST & D STREET
MIDDLE, IOWA 52307

TABLE OF CONTENTS

JOB DESCRIPTION

NAME:

TITLE: Superintendent-Waste Treatment Facility & Emergency Coordinator of Hazardous Waste

REPORT TO: Chief Engineer-Construction

Experience and/or training shall be required and approved by D.E.Q. for this facility.

Provide licensed supervision of the operation of the facility and the related tests required to meet E.P.A. and D.E.Q. regulations:

- Active, on-site technical direction and supervision of one or more operating shifts.
- Day-to-day operation of cleaning and maintenance of pumps, mixing of chemicals, stocking of chemicals, mixers, proportioners, centrifuge, [illegible]ator, clarifier, filters, weirs, digester and such other equipment related to the facility.
- Day-to-day sampling and testing of water and wastes. Tests include: BOD, COD, [illegible] Solids, Dissolved Solids, Oil, PH, Phenol, Chromium, Zinc and other such tests as may be necessary.

Labeling of hazardous waste containers.

Inspection of hazardous waste treatment facility.

Inspection of hazardous waste storage area.

Inspection and testing of rain water filled containment areas and drainage of same.

Record all required data and file copies.

Prepare shipping manifests and file copies.

Coordinate for emergencies:

- Respond to contingency plan and spill prevention control and countermeasure plan.

All above as prescribed in 40 CFR, 262 - 265.

SPECIMEN

_____ _____ _____

Chief Engineer-Construction

TRAINING REQUIRED FOR HAZARDOUS WASTE COORDINATOR

Name _____

1. The proper use and maintenance of the following:
   - A. Fire Equipment
   - B. Protective Clothing
   - C. Chemical spill clean-up materials and equipment
   - D. Respiratory protective equipment.

2. The proper procedures to follow in case of a spill and/or leak of the following:
   - A. Toxic waste
   - B. Corrosive waste
   - C. Reactive waste
   - D. Ignitable waste

3. Safe handling practices of above materials.

4. Inspection and record keeping procedures for:
   - A. Hazardous waste storage facilities.
   - B. Hazardous waste treatment facilities.

Date	Instructor	Instructor's Title	Amount of Training
1-A			
1-B			
1-C			
1-D			
2-A			
2-B			
2-C			
2-D			
3-A			
3-B			
3-C			
3-D			
4-A			
4-B			

DATES FOR TRAINING - New assigned personnel must be trained by six months after beginning the position. Annual review of the above training is require

EMPLOYEE JOB DESCRIPTION

NAME:

TITLE: Tool Designer

REPORT TO: Manager - Tool Engineering

Responsibilities:

1. Process Amana fabricated parts.
2. Determine tooling requirements, specifying and ordering same.
3. Design and specify special machines and fixtures, as required.
4. Issue tooling work orders for die repairs.
5. Provide tooling estimates for new and revised parts.
6. Analyze and prescribe a course of action on production problems concerning dimensional stability of parts and piece-part production.
7. Process Engineering changes and correct tooling.
8. Consult with Design Engineering on design of both new and revised parts in an effort to keep tooling and labor costs low, yet maintaining high quality.
9. Coordinate die tryouts with Production Control.
10. Be present at die tryouts, whenever possible.
11. Analyze die tryouts and take appropriate action.
12. Perform special work as directed by Manager-Tool Engineering.
13. Coordinate for emergencies:
    - Respond to contingency plan and spill prevention control and countermeasure plan.
14. The proper use and maintenance of the following:
    A. Fire Equipment
    B. Protective Clothing
    C. Chemical spill clean-up materials and equipment
    D. Respiratory protective equipment
15. The proper procedures to follow in case of a spill and/or leak of the following:
    A. Toxic waste
    B. Corrosive waste
    C. Reactive waste
    D. Ignitable waste
16. Safe handling practices of above materials.

Tool Designer _____ Manager-Tool Engineering

TRAINING REQUIRED FOR ALTERNATE HAZARDOUS WASTE COORDINATOR

Name _____

1. The proper use and maintenance of the following:
   A. Fire Equipment
   B. Protective Clothing
   C. Chemical spill clean-up materials and equipment
   D. Respiratory protective equipment.

2. The proper procedures to follow in case of a spill and/or leak of the following:
   A. Toxic waste
   B. Corrosive waste
   C. Reactive waste
   D. Ignitable waste

3. Safe handling practices of above materials.

Date	Instructor	Instructor's Title	Amount Traini
1-A			
1-B			
1-C			
1-D			
2-A			
2-B			
2-C			
2-D			
3-A			
3-B			
3-C			
3-D			

DATES FOR TRAINING - New assigned personnel must be trained by six months after beginning the position. Annual review of the above training is require

JOB RESPONSIBILITIES

NAME:

TITLE: Foreman - Injection Molding

REPORT TO: Superintendent - 3rd Shift

RESPONSIBILITIES:
Know safety rules and regulations and see that they are properly enforced at all times.

Know location of fire extinguisher, fire hoses, exits, etc., in department. Instruct leadmen on operation of fire equipment and workers on exits.

See that quality standards set up by Company engineers and Management are maintaine

See that department schedules published by Production Control are met, within labor standards.

Maintain a housekeeping program acceptable to Management.

Keep scrap at an acceptable level.

See that good working conditions are maintained.

Maintain good working relations with workers, Union stewards, Union officials and other supervisors and [illegible]

Know, follow, and enforce Labor [illegible] attempt to resolve grievances at Step 1.

Participate actively in the Cost Reduction Program.

Work with Manufacturing Engineering on new methods, production problems and reducing costs where possible without interfering with quality.

Check projected schedules and work on problems that may arise as to machine and department loads.

Check for proper use of factory supplies, tools and equipment.

Maintain a steady flow of proper parts throughout department.

When department has more than one shift, relay appropriate information and meet with supervisors.

Maintain, file or turn in proper records/reports as required.

Properly train and instruct employees.

Properly select and train a back-up person.

Follow process instructions, blue prints, issue sheets, standing instructions, guideline and procedure manuals, etc.

The proper use and maintenance of the following:

A. Fire Equipment
B. Protective Clothing
C. Chemical spill clean-up materials and equipment
D. Respiratory protective equipment

The proper procedures to follow in case of a spill and/or leak of the following:

A. Toxic waste
B. Corrosive waste
C. Reactive waste
D. Ignitable waste

Safe handling practices of above materials

Injection Molding Foreman, 3rd Shift
10/16/81

3rd Shift Superintendent
10/16/81

TRAINING REQUIRED FOR BRIGADE FIREMEN
(DESIGNATED SPILL CONTROL MEMBERS)

Name _____

1. The proper use and maintenance of the following:
   - A. Fire Equipment
   - B. Protective Clothing
   - C. Chemical spill clean-up materials and equipment
   - D. Respiratory protective equipment.

2. The proper procedures to follow in case of a spill and/or leak of the following:
   - A. Toxic waste
   - B. Corrosive waste
   - C. Reactive waste
   - D. Ignitable waste

3. Safe handling practices of above materials.

Date	Instructor	Instructor's Title	Amount of Training
1-A			
1-B			
1-C			
1-D			
2-A			
2-B			
2-C			
2-D			
3-A			
3-B			
3-C			
3-D			

DATES FOR TRAINING - New assigned personnel must be trained by six months after beginning the position. Annual review of the above training is required.

JOB DESCRIPTION

NAME:

TITLE: Technician - Waste Treatment Facility

REPORT TO: Superintendent of Waste Treatment Facility

Duties and Responsibilities:

Experience and/or training shall be as required and approved by D.E.Q. for this facility.

Provide operation of the facility and assist with the related tests required to meet E.P.A. and D.E.Q. regulations:

- Day-to-day operation, cleaning and maintenance of pumps, mixing of chemicals, stocking of chemicals, mixers, proportioners, centrifuge, chlorinator, clarifier, filters, weirs, digester and such other equipment related to the facility.
- Day-to-day sampling and testing of water and wastes as required to operate the facility.

Perform such other duties and tests as time permits and as directed by the Superintendent.

E.P.A. requires:

Labeling of hazardous waste containers.
Inspection of hazardous waste treatment facility.
Inspection of hazardous waste storage area.
Inspection and testing of rain water filled containment areas and drainage of same.
Record all required data and file copies.
Prepare shipping manifests and file copies.

Respond to contingency plan and spill prevention control and countermeasure plan.

All above as prescribed in 40-CFR 262-265.

_____ _____ Superintendent-Waste Treatment Facility

TRAINING REQUIRED FOR WASTE TREATMENT PERSONNEL

Name _____

1. The proper use and maintenance of the following:
   - A. Fire Equipment
   - B. Protective Clothing
   - C. Chemical spill clean-up materials and equipment
   - D. Respiratory protective equipment.

2. The proper procedures to follow in case of a spill and/or leak of the following:
   - A. Toxic waste
   - B. Corrosive waste
   - C. Reactive waste
   - D. Ignitable waste

3. Safe handling practices of above materials.

4. Inspection and record keeping procedures for:
   - A. Hazardous waste storage facilities.
   - B. Hazardous waste treatment facilities.

	Date	Instructor	Instructor's Title	Amount of Training
1-A				
1-B				
1-C				
1-D				
2-A				
2-B				
2-C				
2-D				
3-A				
3-B				
3-C				
3-D				
4-A				

DATES FOR TRAINING - New assigned personnel must be trained by six months after beginning the position. Annual review of the above training is required.

AMANA REFRIGERATION, INC.
AMANA, IOWA
JOB DESCRIPTION

GRADE 6

JOB TITLE: FORK TRUCK OPERATOR
NAME: _____

GENERAL DESCRIPTION:
Operates Power Lift Trucks

JOB INCLUDES SKILLS OF THE FOLLOWING NATURE:
1. Use of fork lift trucks.
2. Ability to judge distance and height.
3. Ability to exercise appropriate caution concerning weight of load, type of load, speed of travel and traffic conditions.

RESPONSIBILITIES INCLUDE:
1. Transports various types of materials. Includes fabricated and vendor parts, scrap, waste, finish goods, etc. Locates material in proper places.
2. Places and removes dies in equipment such as presses, storage racks and machines found in factory.
3. Loads and unloads railway cars and trucks.
4. Proper operation of fork [illegible] oil and fuel check of unit when applicable at start of each [illegible] condition report weekly of the fork truck for operation and [illegible]
5. Reports any accident or malfunction of fork [illegible] supervisor immediately. Includes accident to person, factory property, the fork truck and material being transported or handled.
6. Follow rules for safe operation with fork truck with due regard to pedestrian, factory property, the fork truck and material being transported or handled.
7. Performs other related duties as assigned. Examples of some, not conclusive.
   A. Participates in housekeeping activities.
   B. Preparation of material for movement by fork truck.
   C. Participates in material systems for storage and placement.
   D. Participates in scheduling systems for loading material, bringing material to equipment or machines. Includes special tooling for machines.

"Transport containers of hazardous waste from Production area to hazardous waste storage area. Ascertain that all containers and bunks are secure before transporting."

"Must understand and follow training of safety and emergency procedures in the handling of hazardous waste."

TRAINING REQUIRED FOR FORK TRUCK OPERATORS

Name _____

1. Training for power lift truck operators for the safe operation and maintenance of a power lift truck.
2. Safe handling practices of hazardous materials.
3. The procedures to follow in case of a spill or leaking container of:
   - A. Toxic waste
   - B. Corrosive waste
   - C. Reactive waste
   - D. Ignitable waste

Date of Training for [illegible]

	Date	Instructor	Instructor's Title	Amount of Training
1.				
2.				
3/A.				
3/B.				
3/C.				
3/D.				
1.				
2.				
3/A.				
3/B.				
3/C.				
3/D.				

DATES FOR TRAINING - New assigned personnel must be trained by six months after beginning the position. Annual review of the above training is required.

WEEKLY - INSPECTION OF HAZARDOUS WASTE AT TREATMENT PLANT

MONTH _____ YEAR _____

Items to be inspected for corrosion, leaks, free board, deterioration.

ITEMS TO BE INSPECTED	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Chrome Underground Tank																															
Chrome Transfer Pumps																															
Chrome Reduction Module																															
Kolene Mix Tank																															
Time of Inspection																															
Inspectors Name																															

DATE	OBSERVATION	DATE	CORRECTIONS MADE

Inspector

Robert Steiff R.S.
Thomas Hoyer T.H.
Frank Ollinger F.O.

X indicates no discrepancy

WEEKLY INSPECTION OF HAZARDOUS WASTE
STORAGE AREA

DATE_____

TIME_____

STE NAME	NO. OF DRUMS IN STORAGE	NO. OF DRUMS LEAKING	NO. OF DRUMS DAMAGED AND DETERIORATED DRUMS	CORRECTION MADE IF LEAKING OR DETERIORATION IS NOTED

OBSERVATIONS OF HAZARDOUS STORAGE AREA

INSPECTED BY

DATE _____

MONTHLY INSPECTION

SELF-CONTAINED BREATHING APPARATUS

Air Pak No.										
Gauge Reading On Air Cylinder										
Head Bands										
Valve Connections										
Face Piece, Shield										
Face Piece, Rubber										
Air Line Hose										
Rubber Flex Hose										
Regulator										
Warning Device										
Access To Air Pak — Clear										
Access To Air Pak — Obstructed										
Gauge Reading On Spare Cylinders										

MONTHLY PRODUCTION AND DISPOSAL OF HAZARDOUS WASTE

Month _____

	PAINT WASTE (ELECTRO DEP. PAINTING SYSTEM)			KOLENE SALT FROM PAINT STRIPPING			WASTE TOLUOL OR (TOLUENE)			TOLUENE DIISOCYONATE (FOAM A SIDE)			1-1-1 TRICHLOROETHANE			METHYLENE CHLORIDE (FOAM FLUSH)			POLYETHER POLYOL (FOAM B SIDE)			RAW PAINT			CHROME RINSE (PARTS WASHER)		
	TOTAL IN STORAGE AREA	AMOUNT ADDED/ STORAGE AREA	AMOUNT DISPOSED	TOTAL IN STORAGE AREA	AMOUNT ADDED/ STORAGE AREA	AMOUNT TREATED	TOTAL IN STORAGE AREA	AMOUNT ADDED/ STORAGE AREA	AMOUNT SHIPPED TO RECYCLER	TOTAL IN STORAGE AREA	AMOUNT ADDED/ STORAGE AREA	AMOUNT DISPOSED	TOTAL IN STORAGE AREA	AMOUNT ADDED/ STORAGE AREA	AMOUNT RECYCLED	TOTAL IN STORAGE AREA	AMOUNT ADDED/ STORAGE AREA	AMOUNT RECYCLED	TOTAL IN STORAGE AREA	AMOUNT ADDED/ STORAGE AREA	AMOUNT DISPOSED	TOTAL IN STORAGE AREA	AMOUNT ADDED/ STORAGE AREA	AMOUNT DISPOSED		AMOUNT TREATED/GAL.	
1																										1
2																										2
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31																										31
TOTAL																										
TOTAL DRUMS																										
TOTAL GALS.																										
TOTAL LBS.																										

See Back for EPA Record-Keeping Requirement & Waste Descriptions.

EPA RECORD-KEEPING REQUIREMENTS
WASTE DESCRIPTIONS

Name of Waste	Physical Form	E.P.A. ID NO.	Density	Storage Code	Treatment Code	Disposal Code
Paint Waste (Electro Dep. Painting System)	Solid	D-002	11.6#	S01	T-23	D-81
Kolene Salt (Paint Stripping Operation)	Solid	D-002	10.0#	S01	T-31	D-81 Non-Hazardous Landfill
Toluene	Liquid	F-005	7.3	S01	N/A	D-85 Recycler
Toluene Diisocyonate (Foam "A")	Liquid	U-223	10.0#	S01	N/A	D-85 Incinerator
1-1-1 Trichloroethane	Liquid	F-001	9.0#	S01	N/A	D-85 Recycler
Methylene Chloride (Foam Flush)	Liquid	F-002	10.0#	S01	N/A	D-85 Recycler
Polyether Polyol (Foam "B")	Liquid	F-002	10.0#	S01	N/A	D-85 Incinerator
Raw Paint	Liquid	F-003, F-005		S01	N/A	D-85 Incinerator
Chrome Rinse (Parts Washer Operation)	Liquid	D-007	8.3#	S02	T-24 T-46	D-81 Non-Hazardous Landfill

Storage Code:

S01 - Container (barrel, drums, etc.)
S02 - Tank

Disposal Code:

D-81 - Landfill
D-85 - Incinerator
D-85 - Recycler

Treatment Code:

T-23 - Chemical precipitation
T-31 - Neutralization
T-24 - Chemical reduction
T-46 - Ultrafiltration

Annual Report

Report all waste in weight as Short Tons (2,000/lbs.) with a Symbol of "T".

For Monthly & Annual Production & Disposal Reports, use the following:

[redacted]t in U.S. Gallons Symbol of "G".

ANNUAL PRODUCTION & DISPOSAL OF HAZARDOUS WASTE

YEAR _____

		HAZARDOUS WASTE GENERATED										HAZARDOUS WASTE DISPOSED											
	DATE	DAY OF WEEK	PAINT WASTE (ELECTRO. DEP) UNITS	KOLENE SALT UNITS	TOLUENE (TOLUOL) UNITS	TOLUENE DI-ISOCYONATE (FOAM"A"SIDE) UNITS	1-1-1 TRI-CHLOROETHANE UNITS	METHLENE CHLORIDE (FOAM FLUSH) UNITS	POLYETHER POLYOL (FOAM"B"SIDE) UNITS	RAW PAINT UNITS	CHROME RINSE UNITS	UNITS	PAINT WASTE (ELECTRO. DEP.) UNITS	KOLENE SALT UNITS	TOLUENE (TOLUOL) UNITS	TOLUENE DI-ISOCYONATE (FOAM"A"SIDE) UNITS	1-1-1 TRI-CHLOROETHANE UNITS	METHLENE CHLORIDE (FOAM FLUSH) UNITS	POLYETHER POLYOL (FOAM"B"SIDE) UNITS	RAW PAINT UNITS	CHROME RINSE TREATED UNITS	UNITS	UNITS	UNITS	UNITS	UNITS	UNITS	DATE
JAN.	1																										1
	2																										2
FEB.	3																										3
	4																										4
MARCH	5																										5
	6																										6
APRIL	7																										7
	8																										8
MAY	9																										9
	10																										10
JUNE	11																										11
	12																										12
JULY	13																										13
	14																										14
AUG.	15																										15
	16																										16
SEPT.	17																										17
	18																										18
OCT.	19																										19
	20																										20
NOV.	21																										21
	22																										22
DEC.	23																										23
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	27																										27
	28																										28
	29																										29
	30																										30
	31																										31
TOTAL DRUMS																											
TOTAL GALS.																											
TOTAL LBS.																											

SEE BACK FOR EPA RECORD-KEEPING REQUIREMENTS WASTE DESCRIPTIONS.

SIGNATURE OF EXECUTIVE OFFICER OR AGENT

TITLE

EPA RECORD-KEEPING REQUIREMENTS
WASTE DESCRIPTIONS

Name of Waste	Physical Form	E.P.A. ID NO.	Density	Storage Code	Treatment Code	Disposal Code
Paint Waste (Electro Dep. Painting System)	Solid	D-002	11.6#	S01	T-23	D-81
Kolene Salt (Paint Stripping Operation)	Solid	D-002	10.0#	S01	T-31	D-81 Non-Hazardous Landfill
Toluene	Liquid	F-005	7.3	S01	N/A	D-85 Recycler
Toluene Diisocyonate (Foam "A")	Liquid	U-223	10.0#	S01	N/A	D-85 Incinerator
1-1-1 Trichloroethane	Liquid	F-001	9.0#	S01	N/A	D-85 Recycler
Methylene Chloride (Foam Flush)	Liquid	F-002	10.0#	S01	N/A	D-85 Recycler
Polyether Polyol (Foam "B")	Liquid	F-002	10.0#	S01	N/A	D-85 Incinerator
Raw Paint	Liquid	F-003, F-005		S01	N/A	D-85 Incinerator
Chrome Rinse (Parts Washer Operation)	Liquid	D-007	8.3#	S02	T-24 T-46	D-81 Non-Hazardous Landfill

Storage Code:

S01 - Container (barrel, drums, etc.)
S02 - Tank

Disposal Code:

D-81 - Landfill
D-85 - Incinerator
D-85 - Recycler

Treatment Code:

T-23 - Chemical precipitation
T-31 - Neutralization
T-24 - Chemical reduction
T-46 - Ultrafiltration

Annual Report

Report all waste in weight as Short Tons (2,000/lbs.) with a Symbol of "T".

For Monthly & Annual Production & Disposal Reports, use the following:

Report in U.S. Gallons Symbol of "G".

AMANA HAZARDOUS WASTE TRAINING

Part I

15 min.	Introduction
25 min.	Hazardous Waste in Iowa
50 min.	RCRA, What is It and What are Your Responsibilities?
20 min.	Questions & Answers

Part II

15 min.	Hazardous Waste Generation at Amana Nature of the waste streams Location of waste streams Potential volumes to be handled
25 min.	Treatment & Storage of Hazardous Waste at Amana Hex Chromium - treatment Kolene salt - treatment Raw paint waste Toluene waste H-1 Trichloroethane Toluene Di-isocyonate PolyetherPolyol waste Methlene Chloride
15 min.	Safety When Working with Hazardous Waste -TDI Flammables Poisons
35 min.	Introduction to Hazardous Waste Plan Step by Step through the plan with discussion on the why and how of the plan

Part III

45 min.	Use of the Contingency Plan A series of questions and problems to be answered from past experience and through use of the plan.
30 min.	Hazardous Waste Spill: response and safety when fire is involved.
20 min.	Hazardous Waste Storage Area: operation and procedures, or a walk through the area.
25 min.	Discussion of Overall Plan and its use to include discussion of past TDI spill.

A T T A C H M E N T D

PETITION FOR DELISTING

AMANA REFRIGERATION, INC.

AMANA, IOWA

FORM 3578 4/7/76

MATERIAL SAFETY DATA SHEET

NFPA 1-7

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

DATE OF PREP. 11-4-80

Section I

MANUFACTURER'S NAME: PPG Industries, Inc.
Coatings & Resins Divison

STREET ADDRESS: One Gateway Center CITY, STATE, AND ZIP CODE: Pittsburgh, PA 15222
Attn: Manager, Industrial Hygiene and Product Safety

EMERGENCY TELEPHONE NO. (304) 843-1300

PRODUCT CLASS: Acrylic

MANUFACTURERS CODE IDENTIFICATION: AS129G659 (101780D)

TRADE NAME: Texture Gray Enamel

Section II — HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV PPM	TLV mg/M³	LEL	VAPOR PRESSURE
Lead Chromate	< 5		.05	n/a	n/a
Xylol	20	100		1.1	6.3
Toluol	15	100		1.3	22.4
Isobutanol	< 5	50		1.2	8.0
Diethylene Glycol Monobutyl Ether	< 5	Not Established		0.9	0.1
Aromatic Hydrocarbons	< 5	100		1.0	3.0
n-Butanol	< 5	50		1.7	4.0
Methyl Ethyl Ketone	< 5	200		1.8	70.0
Diacetone Alcohol	< 5	50		1.8	1.0
Epoxy Resin	< 5	Not Established		n/a	n/a
(Lead as % Non-Volatile = 1.07%)					

Section III — PHYSICAL DATA

BOILING RANGE: 80 to 231° C.

VAPOR DENSITY: [X] HEAVIER [ ] LIGHTER THAN AIR

EVAPORATION RATE: [ ] FASTER [X] SLOWER THAN ETHER

PERCENT VOLATILE BY VOLUME: 59.2

WEIGHT PER GALLON: 9.9

Section IV — FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY: Flammable

FLASH POINT: 34° F P.M.C.C.

LEL: 1.2

EXTINGUISHING MEDIA: Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical or foam) designed to extinguish NFPA Class IB Flammable Liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Do not apply on hot surfaces.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

Section V — HEALTH HAZARD D/ AS129G659

THRESHOLD LIMIT VALUE See Section II.

EFFECTS OF OVEREXPOSURE Inhalation: Anesthetic. Irritation of the respiratory tract or acute nervous system depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma. Skin or Eye Contact: Sensitizer. Lead poisoning is characterized by metallic taste in mouth, loss of appetite, indigestion, nausea, vomiting, constipation, abdominal cramps, disturbance of rest and sleep, and weakness.

EMERGENCY AND FIRST AID PROCEDURES Fumes: Remove from exposure. Restore breathing. Keep warm and quiet. Notify a physician. Splash (Eyes): Flush immediately with copious quantities of running water for at least 15 minutes. Take to a physician for definitive medical treatment. Splash (Skin): Wash affected areas with water. Remove contaminated clothing. Consult a physician.

Section VI — REACTIVITY DATA

STABILITY [ ] UNSTABLE [X] STABLE CONDITIONS TO AVOID Unknown

INCOMPATABILITY (*Materials to avoid*) Unknown

HAZARDOUS DECOMPOSITION PRODUCTS May produce hazardous fumes when heated to decomposition as in welding. Fumes may contain carbon monoxide, lead oxide, oxides of chromium, oxides of nitrogen.

HAZARDOUS POLYMERIZATION [ ] MAY OCCUR [Xx] WILL NOT OCCUR

CONDITIONS TO AVOID Unknown

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove all sources of ignition (flames, hot surfaces, and electrical, static, or frictional sparks). Avoid breathing vapors. Ventilate area. Remove with inert absorbent and non-sparking tools.

WASTE DISPOSAL METHOD Dispose in accordance with local, state, and federal regulation Do not incinerate closed containers.

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION In outdoor or open areas use NIOSH approved mechanical filter respirator to remove solid air borne particles of overspray during spray application. In restricted ventilation areas use NIOSH approved chemical-mechanical filters designed to remove a combination of particulate and gas and vapor. In confined areas use NIOSH approved air line type respirators or hoods.

VENTILATION Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of most hazardous ingredient in Section II below acceptab limit, LEL in Section IV below stated limit, and to remove decomposition products during welding or flame cutting on surfaces coated with this product.

PROTECTIVE GLOVES Required for prolonged or repeated contact.

EYE PROTECTION Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT Prevent prolonged skin contact to contaminated clothing.

Section IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Do not store above 120°F. Store large quantities in buildings designed and protected for storage of NFPA Class IB Flammable Liquids.

OTHER PRECAUTIONS Do not take internally. Containers should be grounded when pouri Avoid free fall of liquid in excess of a few inches. Do not flame cut, braze or weld without NIOSH approved respirator or appropriate ventilation. Ovens must operate properly, be vented.
Contains Chromate Pigments. During spray application or dried film sanding, engineering and administrative controls must be instituted to maintain an exposure level below .05 mg/m^3. If these controls are not adequate, the use of a respirator is recommended. See text of Label Warning on attached sheet. #584

FORM 3578 - 4/1/76

MATERIAL SAFETY DATA SHEET

NPCA 1-

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

DATE OF PREP. 11-4-80

ILLEGIBLE DOCUMENT

Section I

MANUFACTURER'S NAME: PPG Industries, Inc.
Coatings & Resins Divison

STREET ADDRESS: One Gateway Center CITY, STATE, AND ZIP CODE: Pittsburgh, PA 15222
Attn: Manager, Industrial Hygiene and Product Safety

EMERGENCY TELEPHONE NO.: (304) 843-1300

PRODUCT CLASS: Acrylic

MANUFACTURERS CODE IDENTIFICATION: AG129D1206
(10178CD)

TRADE NAME: Creamy White DURACRON® Enamel

Section II — HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV PPM	TLV mg/M³	LEL	VAPOR PRESSURE
Lead Chromate	<.5		.05	n/a	n/a
Xylol	15	100		1.1	6.3
Toluol	15	100		1.3	22.4
Aromatic Hydrocarbons	<5	100		0.9	1.0
n-Butanol	<5	50		1.7	5.5
Diacetone Alcohol	<5	50		1.8	1.1
Isobutanol	<5	50		1.7	8.0
Diethylene Glycol Monobutyl Ether	<5	N.E.		0.9	0.1
Methyl Ethyl Ketone	<5	200		1.8	71.2
Epoxy Resin	<5	*Not Established*		*n/a*	*n/a*
(Lead as % Non-Volatile = .51%)					

Section III — PHYSICAL DATA

BOILING RANGE: 80 to 258°C

VAPOR DENSITY: [X] HEAVIER [ ] LIGHTER THAN AIR

EVAPORATION RATE: [ ] FASTER [X] SLOWER THAN ETHER

PERCENT VOLATILE BY VOLUME: 58.3

WEIGHT PER GALLON: 10.3

Section IV — FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY: Flammable

FLASH POINT: 34°F P.M.C.C.

LEL: 1.2

EXTINGUISHING MEDIA: Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical or foam) designed to extinguish NFPA Class IB Flammable Liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Do not apply on hot surfaces.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

Section V — HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE — See Section II.

EFFECTS OF OVEREXPOSURE — Inhalation: Anesthetic. Irritation of the respiratory tract or acute nervous system depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma. Skin or Eye Contact: Sensitizer. Lead poisoning is characterized by metallic taste in mouth, loss of appetite, indigestion, nausea, vomiting, constipation, abdominal cramps, disturbance of rest and sleep, and weakness.

EMERGENCY AND FIRST AID PROCEDURES — Fumes: Remove from exposure. Restore breathing. Keep warm and quiet. Notify a physician. Splash (Eyes): Flush immediately with copious quantities of running water for at least 15 minutes. Take to a physician for definitive medical treatment. Splash (Skin): Wash affected areas with water. Remove contaminated clothing. Consult a physician.

Section VI — REACTIVITY DATA

STABILITY — [ ] UNSTABLE [X] STABLE — CONDITIONS TO AVOID — unknown

INCOMPATABILITY (*Materials to avoid*) — unknown

HAZARDOUS DECOMPOSITION PRODUCTS — May produce hazardous fumes when heated to decomposition as in welding. Fumes may contain carbon monoxide, lead oxide, chromium oxide.

HAZARDOUS POLYMERIZATION — [ ] MAY OCCUR [X] WILL NOT OCCUR

CONDITIONS TO AVOID — unknown

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED — Remove all sources of ignition (flames, hot surfaces, and electrical, static, or frictional sparks). Avoid breathing vapors. Ventilate area. Remove with inert absorbent and non-sparking tools.

WASTE DISPOSAL METHOD — Dispose in accordance with local, state, and federal regulations. Do not incinerate closed containers.

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION — In outdoor or open areas use NIOSH approved mechanical filter respirator to remove solid air borne particles of overspray during spray application. In restricted ventilation areas use NIOSH approved chemical-mechanical filters designed to remove a combination of particulate and gas and vapor. In confined areas use NIOSH approved air line type respirators or hoods.

VENTILATION — Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of most hazardous ingredient in Section II below acceptable limit, LEL in Section IV below stated limit, and to remove decomposition products during welding or flame cutting on surfaces coated with this product.

PROTECTIVE GLOVES — Required for prolonged or repeated contact.

EYE PROTECTION — Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT — Prevent prolonged skin contact to contaminated clothing.

Section IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING — Do not store above 120°F. Store large quantities in buildings designed and protected for storage of NFPA Class IB Flammable Liquids.

OTHER PRECAUTIONS — Do not take internally. Containers should be grounded when pouring. Avoid free fall of liquid in excess of a few inches. Do not flame cut, braze or weld without NIOSH approved respirator or appropriate ventilation.

Contains Chromate Pigments. During spray application or dried film sanding, engineering and administrative controls must be instituted to maintain an exposure level below .05 mg/m . If these controls are not adequate, the use of a respirator is recommended.

See label warning #4 on attached sheet.

ORM 3578 4/7/76

MATERIAL SAFETY DATA SHEET

NPCA 1-72

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

DATE OF PREP. 11-4-80

Section I

MANUFACTURER'S NAME: PPG Industries, Inc.
Coatings & Resins Divison

STREET ADDRESS: One Gateway Center CITY, STATE, AND ZIP CODE Pittsburgh, PA 15222
Attn: Manager, Industrial Hygiene and Product Safety

EMERGENCY TELEPHONE NO. (304) 843-1300

PRODUCT CLASS Acrylic

MANUFACTURERS CODE IDENTIFICATION AG129D1179 (101680D)

TRADE NAME Almond DURACRON® Enamel-Modified

Section II — HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV PPM	TLV mg/M³	LEL	VAPOR PRESSURE
Lead Chromate	.5		.05	n/a	n/a
Toluol	15	100		1.3	22.4
Xylol	15	100		1.1	6.3
Aromatic Hydrocarbons	<5	100		0.9	1.8
n-Heptane	<5	400		1.2	32.0
n-Butanol	<5	50		1.7	5.5
Isobutanol	<5	50		1.7	8.0
Diacetone Alcohol	<5	50		1.8	1.0
Diethylene Glycol Monobutyl Ether	<5	N.E.		0.9	0.1
Isoparaffinic Solvents	<5	400		0.9	12.0
Methyl Ethyl Ketone	<5	100		1.8	71.2
Epoxy Resin	<5	Not Established		n/a	n/a
(Lead as % Non-Volatile = .27%)					

Section III — PHYSICAL DATA

BOILING RANGE 79 to 258°

VAPOR DENSITY [X] HEAVIER [ ] LIGHTER THAN AIR

EVAPORATION RATE [ ] FASTER [X] SLOWER THAN ETHER

PERCENT VOLATILE BY VOLUME 59.2

WEIGHT PER GALLON 9.2

Section IV — FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY Flammable

FLASH POINT 34° F. P.M.C.C.

LEL 1.2

EXTINGUISHING MEDIA Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical or foam) designed to extinguish NFPA Class IB Flammable Liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Do not apply on hot surfaces.

SPECIAL FIRE FIGHTING PROCEDURES Water spray may be ineffective. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

Section V — HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE See Section II.

EFFECTS OF OVEREXPOSURE Inhalation: Anesthetic. Irritation of the respiratory tract or acute nervous system depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma. Skin or Eye Contact:Primary irritation. Lead poisoning is characterized by metallic taste in mouth, loss of appetite, indigestion, nausea, vomiting, constipation, abdominal cramps, disturbance of rest and sleep, and weakness.

EMERGENCY AND FIRST AID PROCEDURES Fumes: Remove from exposure. Restore breathing. Keep warm and quiet. Notify a physician. Splash (Eyes): Flush immediately with copious quantities of running water for at least 15 minutes. Take to a physician for definitive medical treatment. Splash (Skin): Wash affected areas with water. Remove contaminated clothing. Consult a physician.

Section VI — REACTIVITY DATA

STABILITY ☐ UNSTABLE ☒ STABLE CONDITIONS TO AVOID unknown

INCOMPATABILITY (*Materials to avoid*) unknown

HAZARDOUS DECOMPOSITION PRODUCTS May produce hazardous fumes when heated to decomposition as in welding. Fumes may contain carbon monoxide, lead oxide.

HAZARDOUS POLYMERIZATION ☐ MAY OCCUR ☒ WILL NOT OCCUR

CONDITIONS TO AVOID unknown

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove all sources of ignition (flames, hot surfaces, and electrical, static, or frictional sparks). Avoid breathing vapors. Ventilate area. Remove with inert absorbent and non-sparking tools.

WASTE DISPOSAL METHOD Dispose in accordance with local, state, and federal regulations Do not incinerate closed containers.

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION In outdoor or open areas use NIOSH approved mechanical filter respirator to remove solid air borne particles of overspray during spray application. In restricted ventilation areas use NIOSH approved chemical-mechanical filters designed to remove a combination of particulate and gas and vapor. In confined areas use NIOSH approved air line type respirators or hoods.

VENTILATION Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of most hazardous ingredient in Section II below acceptabl limit, LEL in Section IV below stated limit, and to remove decomposition products during welding or flame cutting on surfaces coated with this product.

PROTECTIVE GLOVES Required for prolonged or repeated contact.

EYE PROTECTION Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT Prevent prolonged skin contact to contaminated clothing.

Section IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Do not store above 120°F. Store large quantitie in buildings designed and protected for storage of NFPA Class IB Flammable Liquids.

OTHER PRECAUTIONS Do not take internally. Containers should be grounded when pourin Avoid free fall of liquid in excess of a few inches. Do not flame cut, braze or weld without NIOSH approved respirator or appropriate ventilation.

Contains Chromate Pigments. During spray application or dried film sanding, engineering and administrative controls must be instituted to maintain an exposure level below .05 mg/m^3. If these controls are not adequate, the use of a respirator is recommended.

See text of attached Label Warning #4.

FORM 3578 4/1/76

MATERIAL SAFETY DATA SHEET

NPCA 1-7

FOR COATINGS, RESINS AND RELATED MATERIALS.

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

DATE OF PREP. 11-4-80

Section I

MANUFACTURER'S NAME: PPG Industries, Inc.
Coatings & Resins Divison

STREET ADDRESS: One Gateway Center CITY, STATE, AND ZIP CODE: Pittsburgh, PA 15222
Attn: Manager, Industrial Hygiene and Product Safety

EMERGENCY TELEPHONE NO.: (304) 843-1300

PRODUCT CLASS: Acrylic

MANUFACTURERS CODE IDENTIFICATION: AG129W1115 (090380D)

TRADE NAME: White DURACRON® Enamel

Section II — HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV PPM	TLV mg/M³	LEL	VAPOR PRESSURE
Toluol	15	100		1.3	22.4
Xylol	15	100		1.1	6.3
Aromatic Hydrocarbons	30	100		0.9	1.4
n-Heptane	<5	400		1.2	32.0
n-Butanol	<5	50		1.7	4.0
Diacetone Alcohol	<5	50		1.8	1.0
Diethylene Glycol Monobutyl Ether	<5	Not Established		0.9	0.1
Isobutanol	<5	50		1.2	8.0
Isoparaffinic Solvents	<5	400		0.0	0.0
Methyl Ethyl Ketone	<5	200		1.8	71.2
Epoxy Resin	<5	Not Established		n/a	n/a
(Lead as % Non-Volatile =<.06%)					

Section III — PHYSICAL DATA

BOILING RANGE: 79 to 258° C

VAPOR DENSITY: [X] HEAVIER [ ] LIGHTER THAN AIR

EVAPORATION RATE: [ ] FASTER [X] SLOWER THAN ETHER

PERCENT VOLATILE BY VOLUME: 58.5

WEIGHT PER GALLON: 10.2

Section IV — FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY: Flammable

FLASH POINT: 34° F. P.M.C.C.

LEL: 1.2

EXTINGUISHING MEDIA: Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical or foam) designed to extinguish NFPA Class IB Flammable Liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Do not apply on hot surfaces.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

1/15/79 Section V — HEALTH HAZARD DA AG129W1115

THRESHOLD LIMIT VALUE See Section II.

EFFECTS OF OVEREXPOSURE Inhalation: Anesthetic. Irritation of the respiratory tract or acute nervous system depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma. Skin or Eye Contact: Primary irritation.

EMERGENCY AND FIRST AID PROCEDURES Fumes: Remove from exposure. Restore breathing. Keep warm and quiet. Notify a physician. Splash (Eyes): Flush immediately with copious quantities of running water for at least 15 minutes. Take to a physician for definitive medical treatment. Splash (Skin): Wash affected areas with water. Remove contaminated clothing. Consult a physician.

Section VI — REACTIVITY DATA

STABILITY ☐ UNSTABLE — ☒ STABLE CONDITIONS TO AVOID Unknown

INCOMPATABILITY (*Materials to avoid*) Unknown

HAZARDOUS DECOMPOSITION PRODUCTS May produce hazardous fumes when heated to decomposition as in welding. Fumes may contain carbon monoxide.

HAZARDOUS POLYMERIZATION ☐ MAY OCCUR ☒ WILL NOT OCCUR

CONDITIONS TO AVOID Unknown

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove all sources of ignition (flames, hot surfaces, and electrical, static, or frictional sparks). Avoid breathing vapors. Ventilate area. Remove with inert absorbent and non-sparking tools.

WASTE DISPOSAL METHOD Dispose in accordance with local, state, and federal regulation Do not incinerate closed containers.

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION In outdoor or open areas use NIOSH approved mechanical filter respirator to remove solid air borne particles of overspray during spray application. In restricted ventilation areas use NIOSH approved chemical-mechanical filters designed to remove a combination of particulate and gas and vapor. In confined areas use NIOSH approved air line type respirators or hoods.

VENTILATION Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of most hazardous ingredient in Section II below acceptabl limit, LEL in Section IV below stated limit, and to remove decomposition products during welding or flame cutting on surfaces coated with this product.

PROTECTIVE GLOVES Required for prolonged or repeated contact.

EYE PROTECTION Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT Prevent prolonged skin contact to contaminated clothing.

Section IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Do not store above 120°F. Store large quantities in buildings designed and protected for storage of NFPA Class IB Flammable Liquids.

OTHER PRECAUTIONS Do not take internally. Containers should be grounded when pourin Avoid free fall of liquid in excess of a few inches. Do not flame cut, braze or weld without NIOSH approved respirator or appropriate ventilation. Ovens must operate properly, be vented.

PPG Label Warning #3: WARNING! FLAMMABLE. VAPOR HARMFUL. Contains Xylol ar or Toluol. Keep away from heat, sparks, and open flame. USE WITH ADEQUATE VENTILATION. Avoid prolonged or repeated contact with skin and breathing of vapor or spray mist. Do not take internally. Close container after each use. KEEP OUT OF THE REACH OF CHILDREN!

FORM 3578 4/1/76

MATERIAL SAFETY DATA SHEET

NPCA 1-72

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

DATE OF PREP. 11-4-80

Section I

MANUFACTURER'S NAME: PPG Industries, Inc.
Coatings & Resins Divison

STREET ADDRESS: One Gateway Center CITY, STATE, AND ZIP CODE: Pittsburgh, PA 15222
Attn: Manager, Industrial Hygiene and Product Safety

EMERGENCY TELEPHONE NO.: (304) 843-1300

PRODUCT CLASS: Acrylic

MANUFACTURERS CODE IDENTIFICATION: AG129C1182 (082980D)

TRADE NAME: Coffee DURACRON® Enamel-Modified

Section II — HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV PPM	TLV mg/M³	LEL	VAPOR PRESSURE
Toluol	20	100		1.3	22.4
Xylol	15	100		1.1	6.3
n-Butanol	5	50		1.7	5.5
n-Heptane	<5	400		1.2	32.0
Diacetone Alcohol	<5	50		1.8	1.1
Isoparaffinic Solvents	<5	400		0.9	12.0
Diethylene Glycol Monobutyl Ether	<5	N.E.		0.9	00.1
Aromatic Hydrocarbons	<5	100		1.0	1.0
Methyl Ethyl Ketone	<5	200		1.8	71.2
Isobutanol	<5	50		1.7	8.0
n-Butyl Acetate	<.5	150		1.3	10.0
Epoxy Resin	<5	Not Established		n/a	n/a
*Chromium Oxide Pigment	.005	(State of Illinois reporting)			

Lead as %Non-Volatile=<.06%

Section III — PHYSICAL DATA

BOILING RANGE: 79 to 258° C

VAPOR DENSITY: [X] HEAVIER [ ] LIGHTER THAN AIR

EVAPORATION RATE: [ ] FASTER [X] SLOWER THAN ETHER

PERCENT VOLATILE BY VOLUME: 59.3

WEIGHT PER GALLON: 8.5

Section IV — FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY: Flammable

FLASH POINT: 34° F. P.M.C.C.

LEL: 1.2

EXTINGUISHING MEDIA: Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical or foam) designed to extinguish NFPA Class IB Flammable Liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Do not apply on hot surfaces.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

FORM 3579 4/7/76

Section V — HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE See Section II.

EFFECTS OF OVEREXPOSURE Inhalation: Anesthetic. Irritation of the respiratory tract or acute nervous system depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma. Skin or Eye Contact: *Sensitizer*rritation.

EMERGENCY AND FIRST AID PROCEDURES Fumes: Remove from exposure. Restore breathing. Keep warm and quiet. Notify a physician. Splash (Eyes): Flush immediately with copious quantities of running water for at least 15 minutes. Take to a physician for definitive medical treatment. Splash (Skin): Wash affected areas with water. Remove contaminated clothing. Consult a physician.

Section VI — REACTIVITY DATA

STABILITY [ ] UNSTABLE [X] STABLE CONDITIONS TO AVOID unknown

INCOMPATABILITY (*Materials to avoid*) unknown

HAZARDOUS DECOMPOSITION PRODUCTS May produce hazardous fumes when heated to decomposition as in welding. Fumes may contain carbon monoxide.

HAZARDOUS POLYMERIZATION [ ] MAY OCCUR [X] WILL NOT OCCUR

CONDITIONS TO AVOID unknown

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove all sources of ignition (flames, hot surfaces, and electrical, static, or frictional sparks). Avoid breathing vapors. Ventilate area. Remove with inert absorbent and non-sparking tools.

WASTE DISPOSAL METHOD Dispose in accordance with local, state, and federal regulation Do not incinerate closed containers.

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION In outdoor or open areas use NIOSH approved mechanical filter respirator to remove solid air borne particles of overspray during spray application. In restricted ventilation areas use NIOSH approved chemical-mechanical filters designed to remove a combination of particulate and gas and vapor. In confined areas use NIOSH approved air line type respirators or hoods.

VENTILATION Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of most hazardous ingredient in Section II below acceptabl limit, LEL in Section IV below stated limit, and to remove decomposition products during welding or flame cutting on surfaces coated with this product.

PROTECTIVE GLOVES Required for prolonged or repeated contact.

EYE PROTECTION Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT Prevent prolonged skin contact to contaminated clothing.

Section IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Do not store above 120°F. Store large quantitie in buildings designed and protected for storage of NFPA Class IB Flammable Liquids.

OTHER PRECAUTIONS Do not take internally. Containers should be grounded when pourir Avoid free fall of liquid in excess of a few inches. Do not flame cut, braze or weld without NIOSH approved respirator or appropriate ventilation.

See label warning #3 on attached sheet.

FORM 3578 4/7/76

MATERIAL SAFETY DATA SHEET

NPCA 1-72

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

DATE OF PREP. 11-4-80

Section I

MANUFACTURER'S NAME: PPG Industries, Inc.
Coatings & Resins Divison

STREET ADDRESS: One Gateway Center CITY, STATE, AND ZIP CODE: Pittsburgh, PA 15222
Attn: Manager, Industrial Hygiene and Product Safety

EMERGENCY TELEPHONE NO.: (304) 843-1300

PRODUCT CLASS: Acrylic

MANUFACTURERS CODE IDENTIFICATION: AG129A1181 (101780D)

TRADE NAME: Avocado DURACRON® Enamel-Modified

Section II — HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV PPM	TLV mg/M³	LEL	VAPOR PRESSURE
Lead Chromate	< 5		.05	n/a	n/a
Toluol	20	100		1.3	22.4
Xylol	10	100		1.1	6.3
Isobutanol	< 5	50		1.7	8.0
n-Butanol	< 5	50		1.7	5.5
n-Heptane	< 5	200		1.2	32.0
Diacetone Alcohol	< 5	50		1.8	1.0
Aromatic Hydrocarbons	< 5	100		1.0	3.0
Isoparaffinic Solvents	< 5	400		0.8	10.0
Diethylene Glycol Monobutyl Ether	< 5	N.E.		0.9	0.1
Methyl Ethyl Ketone	< 5	200		1.8	71.2
n-Butyl Acetate	< .5	150		1.3	10.0
Epoxy Resin	< 5	N.E.		n/a	n/a

Lead as %Non-Volatile=1.70%

Section III — PHYSICAL DATA

BOILING RANGE: 79 to 2300 C.

VAPOR DENSITY: [X] HEAVIER [ ] LIGHTER, THAN AIR

EVAPORATION RATE: [ ] FASTER [X] SLOWER, THAN ETHER

PERCENT VOLATILE BY VOLUME: 59.3

WEIGHT PER GALLON: 8.6

Section IV — FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY: Flammable

FLASH POINT: 34° F. P.M.C.C.

LEL: 1.2

EXTINGUISHING MEDIA: Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical or foam) designed to extinguish NFPA Class IB Flammable Liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Do not apply on hot surfaces.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

ction V — HEALTH HAZARD D.

THRESHOLD LIMIT VALUE See Section II.

EFFECTS OF OVEREXPOSURE Inhalation: Anesthetic. Irritation of the respiratory tract or acute nervous system depression characterized by headache, dizziness, sta gering gait, confusion, unconsciousness or coma. Skin or Eye Contact: Sensitizer. Lead poisoning is characterized by metallic taste in mouth, los of appetite, indigestion, nausea, vomiting, constipation, abdominal cramps, disturbance of rest and sleep, and weakness.

EMERGENCY AND FIRST AID PROCEDURES Fumes: Remove from exposure. Restore breathing. Keep warm and quiet. Notify a physician. Splash (Eyes): Flush immediately with copious quantities of running water for at least 15 minutes. Take to a physician for definitive medical treatment. Splash (Skin): Wash affected areas with water. Remove contaminated clothing. Consult a physician.

Section VI — REACTIVITY DATA

STABILITY ☐ UNSTABLE ☒ STABLE CONDITIONS TO AVOID unknown

INCOMPATABILITY (*Materials to avoid*) unknown

HAZARDOUS DECOMPOSITION PRODUCTS May produce hazardous fumes when heated to decompositic as in welding. Fumes may contain carbon monoxide, lead oxide, oxides of chromium.

HAZARDOUS POLYMERIZATION ☐ MAY OCCUR ☒ WILL NOT OCCUR

CONDITIONS TO AVOID unknown

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove all sources of ignition (flames, hot surfaces, and electrical, static, or frictional sparks). Avoid breathing vapors. Ventilate area. Remove with inert absorbent and non-sparking tools.

WASTE DISPOSAL METHOD Dispose in accordance with local, state, and federal regulatio Do not incinerate closed containers.

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION In outdoor or open areas use NIOSH approved mechanical filter respirator to remove solid air borne particles of overspray during spray application. In restricted ventilation areas use NIOSH approved chemical-mechanical filters designed to remove a combination of particulate and gas and vapor. In confined areas use NIOSH-approved air line type respirators or hoods.

VENTILATION Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of most hazardous ingredient in Section II below acceptab limit, LEL in Section IV below stated limit, and to remove decomposition products during welding or flame cutting on surfaces coated with this product

PROTECTIVE GLOVES Required for prolonged or repeated contact.

EYE PROTECTION Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT Prevent prolonged skin contact to contaminated clothing.

Section IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Do not store above 120°F. Store large quantitie in buildings designed and protected for storage of NFPA Class IB Flammable Liquids.

OTHER PRECAUTIONS Do not take internally. Containers should be grounded when pouri Avoid free fall of liquid in excess of a few inches. Do not flame cut, braze or weld without NIOSH approved respirator or appropriate ventilation.

Contains Chromate Pigments. During spray application or dried film sanding, engineering and administrative controls must be instituted to maintain an exposure level below .05 mg/m . If these controls are not adequate, the use of a respirator is recommended.
See label warning #4 on attached sheet.

FORM 3578 4/1/76

MATERIAL SAFETY DATA SHEET

NPCA 1-7

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

DATE OF PREP. 11-4-80

Section I

MANUFACTURER'S NAME: PPG Industries, Inc.
Coatings & Resins Divison

STREET ADDRESS: One Gateway Center CITY, STATE, AND ZIP CODE: Pittsburgh, PA 15222
Attn: Manager, Industrial Hygiene and Product Safety

EMERGENCY TELEPHONE NO.: (304) 843-1300

PRODUCT CLASS: Acrylic

MANUFACTURERS CODE IDENTIFICATION: AS129D1020 (101780D)

TRADE NAME: Brown DURACRON® Acrylic - 50% Gloss

Section II — HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT Wt.	TLV PPM	TLV mg/M³	LEL	VAPOR PRESSURE
Toluol	*15*	*100*		*1.3*	*22.4*
Xylol	*15*	*100*		*1.1*	*6.3*
Aromatic Hydrocarbons	40	100		1.1	16.6
n-Butanol	<5	50		1.7	4.0
Diethylene Glycol Monobutyl Ether	<5	Not Established		0.9	0.1
Diacetone Alcohol	<5	50		1.8	1.0
Methyl Ethyl Ketone	<5	200		1.8	70.0
Isobutanol	<5	50		1.2	8.0
Epoxy Resin	*5*	*Not Established*		*n/a*	*n/a*
Lead as % Non-Volatile < 0.06%					

Section III — PHYSICAL DATA

BOILING RANGE: 80 to 258°C

VAPOR DENSITY: [X] HEAVIER [ ] LIGHTER THAN AIR

EVAPORATION RATE: [ ] FASTER [X] SLOWER THAN ETHER

PERCENT VOLATILE BY VOLUME: 58.2

WEIGHT PER GALLON: 9.0

Section IV — FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY: Flammable

FLASH POINT: 34°F P.M.C.C.

LEL: 1.2

EXTINGUISHING MEDIA: Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical or foam) designed to extinguish NFPA Class IB Flammable Liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Do not apply on hot surfaces.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

12/8/78 Section V — HEALTH HAZARD D. A AS129D1020

THRESHOLD LIMIT VALUE See Section II.

EFFECTS OF OVEREXPOSURE Inhalation: Anesthetic. Irritation of the respiratory tract or acute nervous system depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma.
Skin or Eye Contact: *Sensitizer*

EMERGENCY AND FIRST AID PROCEDURES Fumes: Remove from exposure. Restore breathing. Keep warm and quiet. Notify a physician. Splash (Eyes): Flush immediately with copious quantities of running water for at least 15 minutes. Take to a physician for definitive medical treatment. Splash (Skin): Wash affected areas with water. Remove contaminated clothing. Consult a physician.

Section VI — REACTIVITY DATA

STABILITY [ ] UNSTABLE [X] STABLE CONDITIONS TO AVOID Unknown

INCOMPATABILITY (*Materials to avoid*) Unknown

HAZARDOUS DECOMPOSITION PRODUCTS May produce hazardous fumes when heated to decomposition as in welding. Fumes may contain carbon monoxide, oxides of nitrogen.

HAZARDOUS POLYMERIZATION [ ] MAY OCCUR [X] WILL NOT OCCUR

CONDITIONS TO AVOID Unknown

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove all sources of ignition (flames, hot surfaces, and electrical, static, or frictional sparks). Avoid breathing vapors. Ventilate area. Remove with inert absorbent and non-sparking tools.

WASTE DISPOSAL METHOD Dispose in accordance with local, state, and federal regulation Do not incinerate closed containers.

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION In outdoor or open areas use NIOSH approved mechanical filter respirator to remove solid air borne particles of overspray during spray application. In restricted ventilation areas use NIOSH approved chemical-mechanical filters designed to remove a combination of particulate and gas and vapor. In confined areas use NIOSH approved air line type respirators or hoods.

VENTILATION Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of most hazardous ingredient in Section II below acceptab limit, LEL in Section IV below stated limit, and to remove decomposition products during welding or flame cutting on surfaces coated with this product.

PROTECTIVE GLOVES Required for prolonged or repeated contact.

EYE PROTECTION Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT Prevent prolonged skin contact to contaminated clothing.

Section IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Do not store above 120°F. Store large quantitie in buildings designed and protected for storage of NFPA Class IB Flammable Liquids.

OTHER PRECAUTIONS Do not take internally. Containers should be grounded when pouri Avoid free fall of liquid in excess of a few inches. Do not flame cut, braze or weld without NIOSH approved respirator or appropriate ventilation.
Ovens must operate properly, be vented.
PPG Label Warning #3: WARNING. FLAMMABLE. VAPOR HARMFUL. Contains Xylol and/or Toluol. Keep away from heat, sparks, and open flame. USE WITH ADEQUA VENTILATION. Avoid prolonged or repeated contact with skin and breathing of vapor or spray mist. Do not take internally. Close container after each use KEEP OUT OF THE REACH OF CHILDREN.

FORM 3578 4/1/76

MATERIAL SAFETY DATA SHEET

NPCA 1-7

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

DATE OF PREP. 4-7-80

Section I

MANUFACTURER'S NAME: PPG Industries, Inc.
Coatings & Resins Divison

STREET ADDRESS: One Gateway Center CITY, STATE, AND ZIP CODE: Pittsburgh, PA 15222
Attn: Manager, Industrial Hygiene and Product Safety

EMERGENCY TELEPHONE NO.: (304) 843-1300 [illegible]

PRODUCT CLASS: Acrylic

MANUFACTURERS CODE IDENTIFICATION: AS271D290 (091479D)

TRADE NAME: Tan Exterior DURACRON® Enamel

Section II — HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV PPM	TLV mg/M³	LEL	VAPOR PRESSURE
Xylol	30	100		1.1	6.3
Aromatic Hydrocarbons	10	100		0.9	1.0
n-Butanol	5	50		1.7	4.0
Diethylene Glycol Monobutyl Ether	<5	N.E.		0.9	0.1
Isobutanol	<5	50		1.7	8.0
Toluol	<5	100		1.3	22.4
Acrylic Ester Monomers	<5	N.E.		UI	UI
Epoxy Resin	<5	N.E.		n/a	n/a
(lead as % Non-Volatile <.06%)					

Section III — PHYSICAL DATA

BOILING RANGE: 80 to 258 °C

VAPOR DENSITY: [X] HEAVIER [ ] LIGHTER THAN AIR

EVAPORATION RATE: [ ] FASTER [X] SLOWER THAN ETHER

PERCENT VOLATILE BY VOLUME: 61.2

WEIGHT PER GALLON: 9.1

Section IV — FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY: Flammable

FLASH POINT: 34°F P.M.C.C.

LEL: 1.0

EXTINGUISHING MEDIA: Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical or foam) designed to extinguish NFPA Class IB Flammable Liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Do not apply on hot surfaces.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

Section V — HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE See Section II.

EFFECTS OF OVEREXPOSURE Inhalation: Anesthetic. Irritation of the respiratory tract or acute nervous system depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma. Skin or Eye Contact: Primary irritation. May sensitize skin.

EMERGENCY AND FIRST AID PROCEDURES Fumes: Remove from exposure. Restore breathing. Keep warm and quiet. Notify a physician. Splash (Eyes): Flush immediately with copious quantities of running water for at least 15 minutes. Take to a physician for definitive medical treatment. Splash (Skin): Wash affected areas with water. Remove contaminated clothing. Consult a physician.

Section VI — REACTIVITY DATA

STABILITY ☐ UNSTABLE ☒ STABLE CONDITIONS TO AVOID unknown

INCOMPATABILITY (*Materials to avoid*) unknown

HAZARDOUS DECOMPOSITION PRODUCTS May produce hazardous fumes when heated to decompositior as in welding. Fumes may contain carbon monoxide.

HAZARDOUS POLYMERIZATION ☐ MAY OCCUR ☒ WILL NOT OCCUR

CONDITIONS TO AVOID unknown

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove all sources of ignition (flames, hot surfaces, and electrical, static, or frictional sparks). Avoid breathing vapors. Ventilate area. Remove with inert absorbent and non-sparking tools.

WASTE DISPOSAL METHOD Dispose in accordance with local, state, and federal regulation Do not incinerate closed containers.

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION In outdoor or open areas use NIOSH approved mechanical filter respirator to remove solid air borne particles of overspray during spray application. In restricted ventilation areas use NIOSH approved chemical-mechanical filters designed to remove a combination of particulate and gas and vapor. In confined areas use NIOSH approved air line type respirators or hoods.

VENTILATION Provide general dilution or local exhaust ventilation in volume and pattern to ! ep TLV of most hazardous ingredient in Section II below acceptabl limit, LEL in Section IV below stated limit, and to remove decomposition products during welding or flame cutting on surfaces coated with this product.

PROTECTIVE GLOVES Required for prolonged or repeated contact.

EYE PROTECTION Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT Prevent prolonged skin contact to contaminated clothing.

Section IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Do not store above 120°F. Store large quantities in buildings designed and protected for storage of NFPA Class IB Flammable Liquids.

OTHER PRECAUTIONS Do not take internally. Containers should be grounded when pourin Avoid free fall of liquid in excess of a few inches. Do not flame cut, braze or weld without NIOSH approved respirator or appropriate ventilation.

L. W. #3 - WARNING! FLAMMABLE. VAPOR HARMFUL. CONTAINS: Xylol and/or Toluo Keep away from heat, sparks, and open flame. USE WITH ADEQUATE VENTILATION. Avoid prolonged or repeated contact with skin and breathing of vapor or spray mist. Do not take internally. Close container after each use.
KEEP OUT OF THE REACH OF CHILDREN.

FORM 3578 4/1/76

MATERIAL SAFETY DATA SHEET

NPCA 1-7

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

DATE OF PREP. 11-4-80

Section I

MANUFACTURER'S NAME: PPG Industries, Inc.
Coatings & Resins Divison

STREET ADDRESS: One Gateway Center CITY, STATE, AND ZIP CODE Pittsburgh, PA 15222
Attn: Manager, Industrial Hygiene and Product Safety

EMERGENCY TELEPHONE NO. (304) 843-1300

PRODUCT CLASS Acrylic

MANUFACTURERS CODE IDENTIFICATION AG129L1109 (0503780)

TRADE NAME 60-70% Gloss Black DURACRON® Enamel

Section II — HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV PPM	TLV mg/M³	LEL	VAPOR PRESSURE
Xylol	20	100		1.1	6.3
Toluol	20	100		1.3	22.4
Aromatic Hydrocarbons	<5	100		1.0	3.0
n-butanol	<5	50		1.7	5.5
Isobutanol	<5	50		1.7	8.0
Methyl Ethyl Ketone	<5	200		1.8	72.0
Diethylene Glycol Monobutyl Ether	<5	Not Established		0.9	0.1
Epoxy Resin	<5	Not Established		n/a	n/a
(Lead as % Non-Volatile = <.06%)					

Section III — PHYSICAL DATA

BOILING RANGE 80 to 231° C

VAPOR DENSITY [X] HEAVIER [ ] LIGHTER THAN AIR

EVAPORATION RATE [ ] FASTER [X] SLOWER THAN ETHER

PERCENT VOLATILE BY VOLUME 61.1

WEIGHT PER GALLON 8.2

Section IV — FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY Flammable

FLASH POINT 34° F. P.M.C.C.

LEL 1.1

EXTINGUISHING MEDIA Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical or foam) designed to extinguish NFPA Class IB Flammable Liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Do not apply on hot surfaces.

SPECIAL FIRE FIGHTING PROCEDURES Water spray may be ineffective. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

Section V — HEALTH HAZARD DATA

AG129L1109

THRESHOLD LIMIT VALUE See Section II.

EFFECTS OF OVEREXPOSURE Inhalation: Anesthetic. Irritation of the respiratory trac or acute nervous system depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma.
Skin or Eye Contact:

EMERGENCY AND FIRST AID PROCEDURES Fumes: Remove from exposure. Restore breathing. Kee warm and quiet. Notify a physician. Splash (Eyes): Flush immediately with copious quantities of running water for at least 15 minutes. Take to a physician for definitive medical treatment. Splash (Skin): Wash affected areas with water. Remove contaminated clothing. Consult a physician.

Section VI — REACTIVITY DATA

STABILITY ☐ UNSTABLE ☒ STABLE CONDITIONS TO AVOID Unknown
INCOMPATABILITY (*Materials to avoid*) Unknown
HAZARDOUS DECOMPOSITION PRODUCTS May produce hazardous fumes when heated to decompositi as in welding. Fumes may contain Carbon Monoxide, Carbon Dioxide, Oxides of Nitrogen.
HAZARDOUS POLYMERIZATION ☐ MAY OCCUR ☒ WILL NOT OCCUR
CONDITIONS TO AVOID Unknown

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove all sources of ignition (flames, hot surfaces, and electrical, static, or frictional sparks). Avoid breathi vapors. Ventilate area. Remove with inert absorbent and non-sparking tool
WASTE DISPOSAL METHOD Dispose in accordance with local, state, and federal regulat Do not incinerate closed containers.

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION In outdoor or open areas use NIOSH approved mechanical filte respirator to remove solid air borne particles of overspray during spray application. In restricted ventilation areas use NIOSH approved chemical-mechanical filters designed to remove a combination of particulate and gas and vapor. In confined areas use NIOSH approved air line type respirators or hoods.
VENTILATION Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of most hazardous ingredient in Section II below accepta limit, LEL in Section IV below stated limit, and to remove decomposition products during welding or flame cutting on surfaces coated with this produc
PROTECTIVE GLOVES Required for prolonged or repeated contact.
EYE PROTECTION Use safety eyewear designed to protect against splash of liquids.
OTHER PROTECTIVE EQUIPMENT Prevent prolonged skin contact to contaminated clothing.

Section IX — SPECIAL PRECAUTIONS

PRECAUTI TO BE TAKEN IN HANDLING AND STORING Do not store above 120°F. Store large quantities in buildings designed and protected for storage of NFPA Class IB Flammable Liquids.
OTHER PRECAUTIONS Do not take internally. Containers should be grounded when pour Avoid free fall of liquid in excess of a few inches. Do not flame cut, braz or weld without NIOSH approved respirator or appropriate ventilation. Ovens must operate properly, be vented.

See text of Label Warning on attached sheet. (PPG Label Warning #3)

FORM 3578 4/1/96

MATERIAL SAFETY DATA SHEET

NFPA 1-1

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

DATE OF PREP. 11-4-80

Section I

MANUFACTURER'S NAME: PPG Industries, Inc.
Coatings & Resins Divison

STREET ADDRESS: One Gateway Center CITY, STATE, AND ZIP CODE: Pittsburgh, PA 15222
Attn: Manager, Industrial Hygiene and Product Safety

EMERGENCY TELEPHONE NO. (304) 843-1300

PRODUCT CLASS: Acrylic

MANUFACTURERS CODE IDENTIFICATION: AS129G1158
(091580D)

TRADE NAME: Gray DURACRON® Enamel

Section II — HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV PPM	TLV mg/M³	LEL	VAPOR PRESSURE
Toluol	15	100		1.3	22.4
Xylol	15	100		1.1	6.3
Aromatic Hydrocarbons	<5	100		0.9	2.3
n-Butanol	<5	50		1.7	4.0
Diacetone Alcohol	<5	50		1.8	1.0
Isobutanol	<5	50		1.2	8.0
Diethylene Glycol Monobutyl Ether	<5	N.E.		0.9	1.0
Methyl Ethyl Ketone	<5	200		1.8	70.0
(Lead as % Non-Volatile <.06%)					

Section III — PHYSICAL DATA

BOILING RANGE: 80 to 258°C

VAPOR DENSITY: [X] HEAVIER [ ] LIGHTER THAN AIR

EVAPORATION RATE: [ ] FASTER [X] SLOWER THAN ETHER

PERCENT VOLATILE BY VOLUME: 58.1

WEIGHT PER GALLON: 9.5

Section IV — FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY: Flammable

FLASH POINT: 34°F P.M.C.C.

LEL: 1.2

EXTINGUISHING MEDIA: Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical or foam) designed to extinguish NFPA Class IB Flammable Liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Do not apply on hot surfaces.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

Section V — HEALTH HAZARD DA

AS129G1158

THRESHOLD LIMIT VALUE See Section II.

EFFECTS OF OVEREXPOSURE Inhalation: Anesthetic. Irritation of the respiratory tract or acute nervous system depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma.
Skin or Eye Contact: *Sensitizer*

EMERGENCY AND FIRST AID PROCEDURES Fumes: Remove from exposure. Restore breathing. Keep warm and quiet. Notify a physician. Splash (Eyes): Flush immediately with copious quantities of running water for at least 15 minutes. Take to a physician for definitive medical treatment. Splash (Skin): Wash affected areas with water. Remove contaminated clothing. Consult a physician.

Section VI — REACTIVITY DATA

STABILITY ☐ UNSTABLE ☒ STABLE CONDITIONS TO AVOID Unknown

INCOMPATABILITY (*Materials to avoid*) Unknown

HAZARDOUS DECOMPOSITION PRODUCTS May produce hazardous fumes when heated to decomposition as in welding. Fumes may contain carbon monoxide, oxides of nitrogen.

HAZARDOUS POLYMERIZATION ☐ MAY OCCUR ☒ WILL NOT OCCUR

CONDITIONS TO AVOID Unknown

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove all sources of ignition (flames, hot surfaces, and electrical, static, or frictional sparks). Avoid breathing vapors. Ventilate area. Remove with inert absorbent and non-sparking tools.

WASTE DISPOSAL METHOD Dispose in accordance with local, state, and federal regulation. Do not incinerate closed containers.

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION In outdoor or open areas use NIOSH approved mechanical filter respirator to remove solid air borne particles of overspray during spray application. In restricted ventilation areas use NIOSH approved chemical-mechanical filters designed to remove a combination of particulate and gas and vapor. In confined areas use NIOSH approved air line type respirators or hoods.

VENTILATION Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of most hazardous ingredient in Section II below acceptabl limit, LEL in Section IV below stated limit, and to remove decomposition products during welding or flame cutting on surfaces coated with this product.

PROTECTIVE GLOVES Required for prolonged or repeated contact.

EYE PROTECTION Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT Prevent prolonged skin contact to contaminated clothing.

Section IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Do not store above 120°F. Store large quantities in buildings designed and protected for storage of NFPA Class IB Flammable Liquids.

OTHER PRECAUTIONS Do not take internally. Containers should be grounded when pourin Avoid free fall of liquid in excess of a few inches. Do not flame cut, braze or weld without NIOSH approved respirator or appropriate ventilation.
Ovens must operate properly, be vented.
PPG Label Warning #3: WARNING. FLAMMABLE. VAPOR HARMFUL. Contains Xylol and/or Toluol. Keep away from heat, sparks, and open flame. USE WITH ADEQUAT VENTILATION. Avoid prolonged or repeated contact with skin and breathing of vapor or spray mist. Do not take internally. Close container after each use. KEEP OUT OF THE REACH OF CHILDREN.

ORM 3578 4/1/76

MATERIAL SAFETY DATA SHEET

NPCA-1

FOR COATINGS, RESINS AND RELATED MATERIALS.

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

DATE OF PREP. 11-4-80

Section I

MANUFACTURER'S NAME: PPG Industries, Inc.
Coatings & Resins Divison

STREET ADDRESS: One Gateway Center CITY, STATE, AND ZIP CODE: Pittsburgh, PA 15222
Attn: Manager, Industrial Hygiene and Product Safety

EMERGENCY TELEPHONE NO. (304) 843-1300

PRODUCT CLASS: Acrylic

MANUFACTURERS CODE IDENTIFICATION: AS129W1163 (071480D)

TRADENAME: Off White DURACRON® Enamel

Section II — HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV PPM	TLV mg/M³	LEL	VAPOR PRESSURE
Toluol	15	100		1.3	22.4
Xylol	15	100		1.1	6.3
Aromatic Hydrocarbons	< 5	100		0.9	
n-Butanol	< 5	50		1.7	5.5
Diacetone Alcohol	< 5	50		1.8	1.1
Isobutanol	< 5	50		1.7	8.0
Diethylene Glycol Monobutyl Ether	< 5	N.E.		0.9	0.1
Methyl Ethyl Ketone	< 5	200		1.8	71.2
Epoxy Resin	5	*Not Established*		*n/a*	*n/a*
**Lead Chromate Pigment* (Lead as % Non-Volatile < .06%)	.008	*(State of Illinois reporting)*			

Section III — PHYSICAL DATA

BOILING RANGE: 80 to 258°C

VAPOR DENSITY: [X] HEAVIER [ ] LIGHTER, THAN AIR

EVAPORATION RATE: [ ] FASTER [X] SLOWER, THAN ETHER

PERCENT VOLATILE BY VOLUME: 57.8

WEIGHT PER GALLON: 9.6

Section IV — FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY: Flammable

FLASH POINT: 34°F P.M.C.C.

LEL: 1.2

EXTINGUISHING MEDIA: Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical or foam) designed to extinguish NFPA Class IB Flammable Liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Do not apply on hot surfaces.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

Section V — HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE See Section II.

EFFECTS OF OVEREXPOSURE Inhalation: Anesthetic. Irritation of the respiratory tract or acute nervous system depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma.
Skin or Eye Contact: *Sensitizer*

EMERGENCY AND FIRST AID PROCEDURES Fumes: Remove from exposure. Restore breathing. Keep warm and quiet. Notify a physician. Splash (Eyes): Flush immediately with copious quantities of running water for at least 15 minutes. Take to a physician for definitive medical treatment. Splash (Skin): Wash affected areas with water. Remove contaminated clothing. Consult a physician.

Section VI — REACTIVITY DATA

STABILITY ☐ UNSTABLE ☒ STABLE CONDITIONS TO AVOID unknown

INCOMPATABILITY (*Materials to avoid*) unknown

HAZARDOUS DECOMPOSITION PRODUCTS May produce hazardous fumes when heated to decomposition as in welding. Fumes may contain carbon monoxide.

HAZARDOUS POLYMERIZATION ☐ MAY OCCUR ☒ WILL NOT OCCUR

CONDITIONS TO AVOID unknown

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove all sources of ignition (flames, hot surfaces, and electrical, static, or frictional sparks). Avoid breathing vapors. Ventilate area. Remove with inert absorbent and non-sparking tools.

WASTE DISPOSAL METHOD Dispose in accordance with local, state, and federal regulations Do not incinerate closed containers.

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION In outdoor or open areas use NIOSH approved mechanical filter respirator to remove solid air borne particles of overspray during spray application. In restricted ventilation areas use NIOSH approved chemical-mechanical filters designed to remove a combination of particulate and gas and vapor. In confined areas use NIOSH approved air line type respirators or hoods.

VENTILATION Provide general dilution or local exhaust ventilation in volume and pattern to ! ep TLV of most hazardous ingredient in Section II below acceptable limit, LEL in Section IV below stated limit, and to remove decomposition products during welding or flame cutting on surfaces coated with this product.

PROTECTIVE GLOVES Required for prolonged or repeated contact.

EYE PROTECTION Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT Prevent prolonged skin contact to contaminated clothing.

Section IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Do not store above 120°F. Store large quantities in buildings designed and protected for storage of NFPA Class IB Flammable Liquids.

OTHER PRECAUTIONS Do not take internally. Containers should be grounded when pouring. Avoid free fall of liquid in excess of a few inches. Do not flame cut, braze or weld without NIOSH approved respirator or appropriate ventilation.

L. W. #3 - WARNING! FLAMMABLE. VAPOR HARMFUL. CONTAINS: Xylol and/or Toluol. Keep away from heat, sparks, and open flame. USE WITH ADEQUATE VENTILATION. Avoid prolonged or repeated contact with skin and breathing of vapor or spray mist. Do not take internally. Close container after each use.
KEEP OUT OF THE REACH OF CHILDREN.

FORM 3578 4/1/76

MATERIAL SAFETY DATA SHEET

NFPA 1-1

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

DATE OF PREP. 11-4-80

Section I

MANUFACTURER'S NAME: PPG Industries, Inc.
Coatings & Resins Divison

STREET ADDRESS: One Gateway Center CITY, STATE, AND ZIP CODE: Pittsburgh, PA 15222
Attn: Manager, Industrial Hygiene and Product Safety

EMERGENCY TELEPHONE NO.: (304) 843-1300

PRODUCT CLASS: Acrylic

MANUFACTURERS CODE IDENTIFICATION: AG129Y1180 (082980D)

TRADE NAME: Harvest DURACRON® Enamel-Modified

Section II — HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV PPM	TLV mg/M³	LEL	VAPOR PRESSURE
Lead Chromate	<5		.05	n/a	n/a
Toluol	15	100		1.3	22.4
Xylol	10	100		1.1	6.3
Aromatic Hydrocarbons	<5	100		1.0	3.0
n-Heptane	<5	400		1.2	32.0
n-Butanol	<5	50		1.7	5.5
Isobutanol	<5	50		1.7	8.0
Diacetone Alcohol	<5	50		1.8	1.0
Diethylene Glycol Monobutyl Ether	<5	N.E.		0.9	0.1
Isoparaffinic Solvents	<5	400		0.9	12.0
Methyl Ethyl Ketone	<5	200		1.8	71.2
Epoxy Resin	<5	Not Established		n/a	n/a
(Lead as % Non-Volatile = 3.33%)					

Section III — PHYSICAL DATA

BOILING RANGE: 79 to 258° C

VAPOR DENSITY: [X] HEAVIER [ ] LIGHTER THAN AIR

EVAPORATION RATE: [ ] FASTER [X] SLOWER THAN ETHER

PERCENT VOLATILE BY VOLUME: 59.3

WEIGHT PER GALLON: 9.1

Section IV — FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY: Flammable

FLASH POINT: 34° F. P.M.C.C.

LEL: 1.2

EXTINGUISHING MEDIA: Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical or foam) designed to extinguish NFPA Class IB Flammable Liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Do not apply on hot surfaces.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

FORM 3379 4/76

Section V — HEALTH HAZARD DA

THRESHOLD LIMIT VALUE See Section II.

EFFECTS OF OVEREXPOSURE Inhalation: Anesthetic. Irritation of the respiratory tract or acute nervous system depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma. Skin or Eye Contact: Sensitizer. Lead poisoning is characterized by metallic taste in mouth, loss of appetite, indigestion, nausea, vomiting, constipation, abdominal cramps, disturbance of rest and sleep, and weakness.

EMERGENCY AND FIRST AID PROCEDURES Fumes: Remove from exposure. Restore breathing. Keep warm and quiet. Notify a physician. Splash (Eyes): Flush immediately with copious quantities of running water for at least 15 minutes. Take to a physician for definitive medical treatment. Splash (Skin): Wash affected areas with water. Remove contaminated clothing. Consult a physician.

Section VI — REACTIVITY DATA

STABILITY ☐ UNSTABLE ☒ STABLE CONDITIONS TO AVOID unknown

INCOMPATABILITY (*Materials to avoid*) unknown

HAZARDOUS DECOMPOSITION PRODUCTS May produce hazardous fumes when heated to decomposition as in welding. Fumes may contain carbon monoxide, lead oxide, oxides of chromium.

HAZARDOUS POLYMERIZATION ☐ MAY OCCUR ☒ WILL NOT OCCUR

CONDITIONS TO AVOID unknown

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove all sources of ignition (flames, hot surfaces, and electrical, static, or frictional sparks). Avoid breathing vapors. Ventilate area. Remove with inert absorbent and non-sparking tools.

WASTE DISPOSAL METHOD Dispose in accordance with local, state, and federal regulatior Do not incinerate closed containers.

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION In outdoor or open areas use NIOSH approved mechanical filter respirator to remove solid air borne particles of overspray during spray application. In restricted ventilation areas use NIOSH approved chemical-mechanical filters designed to remove a combination of particulate and gas and vapor. In confined areas use NIOSH approved air line type respirators or hoods.

VENTILATION Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of most hazardous ingredient in Section II below acceptabl limit, LEL in Section IV below stated limit, and to remove decomposition products during welding or flame cutting on surfaces coated with this product.

PROTECTIVE GLOVES Required for prolonged or repeated contact.

EYE PROTECTION Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT Prevent prolonged skin contact to contaminated clothing.

Section IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Do not store above 120°F. Store large quantitie in buildings designed and protected for storage of NFPA Class IB Flammable Liquids.

OTHER PRECAUTIONS Do not take internally. Containers should be grounded when pouri Avoid free fall of liquid in excess of a few inches. Do not flame cut, braze or weld without NIOSH approved respirator or appropriate ventilation.

Contains Chromate Pigments. During spray application or dried film sanding, engineering and administrative controls must be instituted to maintain an exposure level below .05 mg/m . If these controls are not adequate, the use of a respirator is recommended.

See label warning #584 on attached sheet.

FORM 3580 4/7/76

MATERIAL SAFETY DATA SHEET

NPCA 1

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

DATE OF PREP. 6/14/79

Section I

MANUFACTURER'S NAME: PPG Industries, Inc.
Coatings & Resins Division

STREET ADDRESS: One Gateway Center CITY, STATE, AND ZIP CODE: Pittsburgh, PA 15222
Attn: Manager, Industrial Hygiene and Product Safety

EMERGENCY TELEPHONE NO.: (412) 434-3131 or (412) 274-4508, Ext. 326

PRODUCT CLASS: Epoxy

MANUFACTURERS CODE IDENTIFICATION: AC500C1211 (060179D)

TRADE NAME: Brown Cationic Electrocoat Paste

Section II — HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT Wt.	TLV PPM	TLV mg/M³	LEL	VAPOR PRESSURE
Lead	<5		.15	N/A	N/A
2-Butoxy Ethanol	10	50		1.1	0.6
Tin Compounds	<5		.10	N/A	N/A
Lead as % Non-Volatile = 6.19%					

Section III — PHYSICAL DATA

BOILING RANGE: 100 to 171°C

VAPOR DENSITY: [ ] HEAVIER [X] LIGHTER, THAN AIR

EVAPORATION RATE: [ ] FASTER [X] SLOWER, THAN ETHER

PERCENT VOLATILE BY VOLUME: 67.0

WEIGHT PER GALLON: 12.5

Section IV — FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY: Not Regulated

FLASH POINT: 154°F P.M.C.C.

LEL: N/A

EXTINGUISHING MEDIA: Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical or alcohol foam) designed to extinguish NFPA Class IIIA Combustible Liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers may explode (due to the build-up of steam pressure) when exposed to extreme heat.

SPECIAL FIRE FIGHTING PROCEDURES: Water may be used to cool closed containers to prevent pressure build-up and possible explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

6/14/79 ction V — HEALTH HAZARD D A AC500C1211

THRESHOLD LIMIT VALUE See Section II.

EFFECTS OF OVEREXPOSURE Inhalation: Never experienced.
Skin or Eye Contact: Sensitizer.

EMERGENCY AND FIRST AID PROCEDURES Inhalation: Never experienced.
Splash (Eyes): Flush immediately with copious quantities of running water for at least 15 minutes. Take to a physician for definitive medical treatment.
Splash (Skin): Remove with soap and water. Remove contaminated clothing.

Section VI — REACTIVITY DATA

STABILITY ☐ UNSTABLE ☒ STABLE CONDITIONS TO AVOID Unknown

INCOMPATABILITY (*Materials to avoid*) Unknown

HAZARDOUS DECOMPOSITION PRODUCTS May produce hazardous fumes when heated to decompositior as in welding. Fumes may contain carbon monoxide, lead oxide.

HAZARDOUS POLYMERIZATION ☐ MAY OCCUR ☒ WILL NOT OCCUR

CONDITIONS TO AVOID Unknown

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Return material to container.

WASTE DISPOSAL METHOD Dispose in accordance with local, state, and federal regulatio Do not incinerate closed containers.

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION In outdoor or open areas use NIOSH approved mechanical filter respirator to remove solid air borne particles of overspray during spray application. In restricted ventilation areas use NIOSH approved chemical-mechanical filters designed to remove a combination of particulate and gas and vapor. In confined areas use NIOSH approved air line type respirators or hoods.

VENTILATION Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of most hazardous ingredient in Section II below acceptab limit, LEL in Section IV below stated limit, and to remove decomposition products during welding or flame cutting on surfaces coated with this product

PROTECTIVE GLOVES Required for prolonged or repeated contact.

EYE PROTECTION Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT Prevent prolonged skin contact to contaminated clothing.

Section IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Protect from freezing. Do not store above 120°F Store large quantities in buildings designed and protected for storage of NFP Class IIIA Combustible Liquids.

OTHER PRECAUTIONS Do not take internally. Do not flame cut, braze or weld without NIOSH approved respirator or appropriate ventilation.

See text of PPG Label Warning #26 on attached sheet.

Form 3580, 4/7/76

MATERIAL SAFETY DATA SHEET

NPCA 1-

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

DATE OF PREP. 6/22/79

Section I

MANUFACTURER'S NAME: PPG Industries, Inc.
Coatings & Resins Division

STREET ADDRESS: One Gateway Center CITY, STATE, AND ZIP CODE: Pittsburgh, PA 15222
Attn: Manager, Industrial Hygiene and Product Safety

EMERGENCY TELEPHONE NO.: (412) 434-3131 or (412) 274-4508, Ext. 326

PRODUCT CLASS: Acrylic

MANUFACTURERS CODE IDENTIFICATION: AC200Z1210 (053179D)

TRADE NAME: Cationic Electrocoat Vehicle

Section II — HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT Wt.	TLV PPM	TLV mg/M³	LEL	VAPOR PRESSURE
Ethylene Glycol Monophenyl Ether	<5	Not Established		0.0	0.0
Ethylene Glycol Monohexyl Ether	<5	Not Established		0.0	1.0
2-Butoxy Ethanol	<5	50		1.1	0.6
Lead as % Non-Volatile <0.06%					

Section III — PHYSICAL DATA

BOILING RANGE: 100 to 171°C

VAPOR DENSITY: [ ] HEAVIER [X] LIGHTER THAN AIR

EVAPORATION RATE: [ ] FASTER [X] SLOWER THAN ETHER

PERCENT VOLATILE BY VOLUME: 78.2

WEIGHT PER GALLON: 8.6

Section IV — FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY: Not Regulated

FLASH POINT: > 200°F P.M.C.C.

LEL: N/A

EXTINGUISHING MEDIA: Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical or alcohol foam) designed to extinguish NFPA Class IIIB Combustible Liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers may explode (due to the build-up of steam pressure) when exposed to extreme heat.

SPECIAL FIRE FIGHTING PROCEDURES: Water may be used to cool closed containers to prevent pressure build-up and possible explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

5/22/79 — Section V — HEALTH HAZARD DATA — AC200Z1210

THRESHOLD LIMIT VALUE See Section II.

EFFECTS OF OVEREXPOSURE Inhalation: Never experienced.
Skin Contact: Possible primary irritation (material is slightly alkaline).
Eye Contact: Primary irritation.

EMERGENCY AND FIRST AID PROCEDURES Inhalation: Never experienced.
Splash (Eyes): Flush immediately with copious quantities of running water for at least 15 minutes. Take to a physician for definitive medical treatment.
Splash (Skin): Remove with soap and water. Remove contaminated clothing.

Section VI — REACTIVITY DATA

STABILITY [ ] UNSTABLE [X] STABLE CONDITIONS TO AVOID Unknown
INCOMPATABILITY (*Materials to avoid*) Unknown
HAZARDOUS DECOMPOSITION PRODUCTS May produce hazardous fumes when heated to decomposition as in welding. Fumes may contain carbon monoxide.

HAZARDOUS POLYMERIZATION [ ] MAY OCCUR [X] WILL NOT OCCUR
CONDITIONS TO AVOID Unknown

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Return material to container.

WASTE DISPOSAL METHOD Dispose in accordance with local, state, and federal regulations. Do not incinerate closed containers.

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION In outdoor or open areas use NIOSH approved mechanical filter respirator to remove solid air borne particles of overspray during spray application. In restricted ventilation areas use NIOSH approved chemical-mechanical filters designed to remove a combination of particulate and gas and vapor. In confined areas use NIOSH approved air line type respirators or hoods.

VENTILATION Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of most hazardous ingredient in Section II below acceptable limit, LEL in Section IV below stated limit, and to remove decomposition products during welding or flame cutting on surfaces coated with this product.

PROTECTIVE GLOVES Required for prolonged or repeated contact.

EYE PROTECTION Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT Prevent prolonged skin contact to contaminated clothing.

Section IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Protect from freezing. Do not store above 120°F. Store large quantities in buildings designed and protected for storage of NFPA Class IIIB Combustible Liquids.

OTHER PRECAUTIONS Do not take internally. Do not flame cut, braze or weld without NIOSH approved respirator or appropriate ventilation.

PPG Label Warning #25: CAUTION! Do not take internally. Close container after each use. KEEP OUT OF THE REACH OF CHILDREN!

HWM - Amana A
BC
JM

ATTACHMENT C

PETITION FOR DELISTING

AMANA REFRIGERATION, INC.

AMANA, IOWA

SERCO
SANITARY ENGINEERING LABORATORIES, INC.
1922 Main St., Box 625, Cedar Falls, IA 50613 (319) 277-2401
CORNING DIVISION
OFFICES IN
MN • IOWA • IL

Waste Material Analysis

Client: Howard R. Green Company
Attn: Mr. Gene Fritch
4250 Glass Road N.E.
P.O. Box 9009
Cedar Rapids, Iowa 52409

Date Sampled: None Given

Date Received by Laboratory: 10/27/80

Sample Identity: Anolyte Permeate

Analysis

Parameter	Analytical Result		Date Analyzed
Chromium (as Cr)	2	mg/l	11/21/80
Lead (as Pb)	18,000	mg/l	11/21/80

Prepared and Submitted by
SERCO LABORATORIES, CORNING DIV.

Kathleen A. Smit
Laboratory Supervisor

December 18, 1980
nh 287-2Y
#2

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SANITARY ENGINEERING LABORATORIES, INC.
1922 Main St., Box 625, Cedar Falls, IA 50613 (319) 277-2401
CORNING DIVISION
OFFICES IN
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EP Toxicity Test

Client: Howard R. Green Company
Attn: Mr. Gene Fritch
4250 Glass Road N.E.
P.O. Box 9009
Cedar Rapids, Iowa 52409

Date Sampled: None Given

Date Received by Laboratory: 10/27/80

Sample Identity: Anolyte Permeate

Analysis

Parameter	Analytical Result	Date Analyzed
Chromium (as Cr)	0.06 mg/l	11/21/80
Lead (as Pb)	0.33 mg/l	11/21/80

EP Toxicity Test performed according to 40CFR, Part 261.24

Prepared and Submitted by
SERCO LABORATORIES, CORNING DIV.

Kathleen A. Smit
Laboratory Supervisor

December 18, 1980
nh 287-2Y
#2A

SERCO
SANITARY ENGINEERING LABORATORIES, INC.
1922 Main St., Box 625, Cedar Falls, IA 50613 (319) 277-2401
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LABORATORY

Name: SERCO Laboratories, Corning Division
Address: 1922 Main Street
City: Cedar Falls
State: Iowa
Telephone: (319) 277-2401
Zip Code: 50613

STAFF

Position: Division Manager
Employee: Robert E. George
Education: B.S. Chemistry, University of Wisconsin
Experience: City of Elyria, Ohio-Assistant City Chemist (1971-1975)
Carborundum Company-Engineer (1975-1978)
Corning Laboratories, Inc.-Laboratory Supervisor (1978-1979)
SERCO Laboratories, Inc.-Division Manager (1979-present)

Position: Chemist
Employee: David W. Havick
Education: B.A. Chemistry, University of Northern Iowa
Experience: Helena Chemical Company-Quality Control Superintendent (1977-1979)
SERCO Laboratories, Inc.-Chemist (1979-present)

Position: Laboratory Supervisor
Employee: Kathleen A. Smit
Education: B.A. Chemistry, University of Northern Iowa
Experience: Corning Laboratories, Inc.-Chemist (1977-1979)
SERCO Laboratories, Inc.-Laboratory Supervisor (1979-present)

Position: Laboratory Coordinator
Employee: Cheryl L. Wilson
Education: Certified Laboratory Assistant, ASCP Hawkeye Institute of Technology
Experience: Corning Laboratories, Inc.-Laboratory Coordinator (1978-1979)
SERCO Laboratories, Inc.-Laboratory Coordinator (1979-present)

Position: Laboratory Technician
Employee: Marjorie Kloster
Education: Certified Laboratory Assistant, ASCP Hawkeye Institute of Technology
Experience: Iowa Methodist Medical Center-Laboratory Technician (1972-1975)
Schoitz Hospital-Laboratory Technician (1975-1976)
Carnation Dairy, Inc.-Laboratory Technician (1976)
Chamberlain Manufacturing, Inc.-Laboratory Technician (1977)
Corning Laboratories, Inc.-Laboratory Technician (1978-1979)
SERCO Laboratories, Inc.-Laboratory Technician (1979-present)

Position: Laboratory Technician
Employee: Linda Cmelik
Education: Certified Laboratory Assistant, ASCP Lakeland Medical, Dental School
Experience: Elkader Central Hospital-Laboratory Technician (1976-1977)
Corning Laboratories, Inc.-Laboratory Technician (1977-1979)
SERCO Laboratories, Inc.-Laboratory Technician (1979-present)

Position: Laboratory Technician, Treatment Plant Operations
Employee: Stephen A. Mrstik
Education: Kirkwood Community College
Experience: ADM Corn Sweetners-Operator, Laboratory Technician (1977)
City of Solon, Iowa-Operator, Laboratory Technician (1977-1978)
Water Quality Management-Operator, Laboratory Technician (1978-1980)
SERCO Laboratories, Inc.-Operator, Laboratory Technician (1980-present)

SERCO
SANITARY ENGINEERING LABORATORIES, INC.
1922 Main St., Box 625, Cedar Falls, IA 50613 (319) 277-2401
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Test Methods

Parameter	Method
Total Chromium	USEPA Test Methods for Evaluating Solid Waste
Lead	USEPA Test Methods for Evaluating Solid Waste

Equipment

Parameter	Equipment
Heavy Metals	Perkin Elmer 620 Atomic Absorption Spectrophotometer

Sample Handling

All waste materials samples are stored at 4°C in an air tight, non-reactive container. The samples are prepared for analysis according to Test Methods for Evaluating Solid Waste. The EP Toxicity test is performed according to the instructions in Test Methods for Evaluating Solid Waste. The sample extracts are stored and preserved according to the EPA publication Methods for Chemical Analysis of Water and Wastes. All wastes are stored until at least two weeks after the results are reported.

IOWA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR & LAND QUALITY DIVISION

SPECIAL WASTE AUTHORIZATION

Disposal Site: City of Cedar Rapids Sanitary Landfill (57-SDP-3-75P)

The following instructions apply ONLY to the specific waste described and to the volume and time period specified. This is not an overall approval to accept other toxic and hazardous wastes or industrial sludges. DEQ must authorize the disposal of such additional wastes from the same generator or similar wastes from a different generator. Failure to obtain this approval is a violation of Solid Waste Disposal Rule 27.14. These instructions in no way obligate the above-named disposal site to accept the described waste. The disposal site has the final decision whether to accept the waste, and does so at its own risk.

This form shall be kept in the office at the sanitary landfill for review by DEQ personnel. Each disposal shall be recorded on the reverse of this form and reported in accordance with departmental requirements.

Waste and Volume: 4,000 gallons per month of phosphatizing parts washer sludge.

Generator: Amana Refrigeration, Inc., Leonard Rettig - Chief Engineer, construction at 319/622-5511, Middle Amana, Iowa 52204.

Hauler: Same or as per contract hauler.

Time Period: ~~May 1, 1980~~ January 1, 1981 to April ~~30~~ 1, 1981, at the convenience of the landfill operator Mr. Jim Livingston at 319/398-5160.

Instructions:

1. The generator shall pre-arrange a delivery schedule with the landfill operator.
2. The hauler shall identify the waste to the landfill attendant upon arrival at the landfill.
3. The landfill operator shall direct the hauler to the working face.
4. Deposit the waste over compacted refuse, cover with regular refuse and/or soil and compact.
5. The containers may be put in the working face or returned to the generator.

Note: Any appreciable change in this sludge shall be reported to DEQ immediately. No daily maximum is specified. The operator shall refer to his working curve (Amended Permit: Table I "Allowable Liquid Addition, City of Cedar Rapids Sanitary Landfill") and accordingly regulate his receipt and disposal of this and other liquid wastes on a daily basis.

Department contact for this authorization: Gene Evans or Bruce Henning at 515/281-8692

Authorization No. 57375043080-2

Authorized by: Rod Vlieger Date: 4/30/80
Rod Vlieger, P.E.
Chief, Solid Waste Section

RV:ENE:mac/M2 - SWA-CCRSL5

Monthly

IOWA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR & LAND QUALITY DIVISION

SPECIAL WASTE AUTHORIZATION

Disposal Site: City of Cedar Rapids Sanitary Landfill (57-SDP-3-75P)

The following instructions apply ONLY to the specific waste described and to the volume and time period specified. This is not an overall approval to accept other toxic and hazardous wastes or industrial sludges. DEQ must authorize the disposal of such additional wastes from the same generator or similar wastes from a different generator. Failure to obtain this approval is a violation of Solid Waste Disposal Rule 27.14. These instructions in no way obligate the above-named disposal site to accept the described waste. The disposal site has the final decision whether to accept the waste, and does so at its own risk.

This form shall be kept in the office at the sanitary landfill for review by DEQ personnel. Each disposal shall be recorded on the reverse of this form and reported in accordance with departmental requirements.

Waste and Volume: ~~6,000~~ 7,200 gallons per month of parts washing sludge, rolling machine waste, and cleaner liquid waste. Also 300 gallons of tramp oil.

Generator: Amana Refrigeration, Inc., Leonard Rettig - Chief Engineer, construction at 319/622-5511, Middle Amana, Iowa 52204.

Hauler: Same or as per contract hauler.

Time Period: ~~May 1, 1980~~ January 24, 1981 to April ~~30~~, 1981, at the convenience of the landfill operator Mr. Jim Livingston at 319/398-5160.

Instructions:

1. The generator shall pre-arrange a delivery schedule with the landfill operator.
2. The hauler shall identify the waste to the landfill attendant upon arrival at the landfill.
3. The landfill operator shall direct the hauler to the working face.
4. Deposit the waste over compacted refuse, cover with regular refuse and/or soil and compact.
5. The containers may be put in the working face or returned to the generator.

Note: Any appreciable change in this sludge shall be reported to DEQ immediately. No daily maximum is specified. The operator shall refer to his working curve (Amended Permit: Table I "Allowable Liquid Addition, City of Cedar Rapids Sanitary Landfill") and accordingly regulate his receipt and disposal of this and other liquid wastes on a daily basis.

Department contact for this authorization: Gene Evans or Bruce Henning at 515/281-8692

Authorization No. 57375043081

Authorized by: Rod Vlieger Date: 4/30/80
Rod Vlieger, P.E.
Chief, Solid Waste Section

RV:ENE:mac/M2 - SWA-CCRSL1

A T T A C H M E N T B

PETITION FOR DELISTING

AMANA REFRIGERATION, INC.

AMANA, IOWA

SERCO
SANITARY ENGINEERING LABORATORIES, INC.
1922 Main St., Box 625, Cedar Falls, IA 50613 (319) 277-2401
CORNING DIVISION
OFFICES IN
MN • IOWA • IL

Waste Material Anaysis

Client: Howard R. Green Company
Attn: Mr. Gene Fritch
4250 Glass Road N.E.
P.O. Box 9009
Cedar Rapids, Iowa 52409

Date Sampled: None Given

Date Received by Laboratory: 10/27/80

Sample Identity: Treated Paint Sludge

Analysis

Parameter	Analytical Result		Date Analyzed
Chromium (as Cr)	1.2	mg/kg	11/21/80
Lead (as Pb)	350	mg/kg	11/21/80
Toluene	∠10	mg/kg	12/12/80

Prepared and Submitted by
SERCO LABORATORIES, CORNING DIV.

Kathleen A. Smit
Laboratory Supervisor

December 18, 1980
nh 287-2Y
CORRECTED REPORT
#4

∠ means less than

SERCO
SANITARY ENGINEERING LABORATORIES, INC.
1922 Main St., Box 625, Cedar Falls, IA 50613 (319) 277-2401
CORNING DIVISION
OFFICES IN
MN • IOWA • IL

EP Toxicity Test

Client: Howard R. Green Company
Attn: Mr. Gene Fritch
4250 Glass Road N.E.
P.O. Box 9009
Cedar Rapids, Iowa 52409

Date Sampled: None Given

Date Received by Laboratory: 10/27/80

Sample Identity: Treated Paint Sludge

Analysis

Parameter	Analytical Result		Date Analyzed
Chromium (as Cr)	0.05	mg/l	11/21/80
Lead (as Pb)	∠0.10	mg/l	11/21/80
Toluene	∠1	mg/l	12/15/80

EP Toxicity Test performed according to 40CFR, Part 261.24

Prepared and Submitted by
SERCO LABORATORIES, CORNING DIV.

Kathleen A. Smit

Kathleen A. Smit
Laboratory Supervisor

December 18, 1980
nh 277-2Y
CORRECTED REPORT
#4A

∠ means less than

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SANITARY ENGINEERING LABORATORIES, INC.
1922 Main St., Box 625, Cedar Falls, IA 50613 (319) 277-2401
CORNING DIVISION
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LABORATORY

Name: SERCO Laboratories, Corning Division
Address: 1922 Main Street
City: Cedar Falls
State: Iowa
Telephone: (319) 277-2401
Zip Code: 50613

STAFF

Position: Division Manager
Employee: Robert E. George
Education: B.S. Chemistry, University of Wisconsin
Experience: City of Elyria, Ohio-Assistant City Chemist (1971-1975)
Carborundum Company-Engineer (1975-1978)
Corning Laboratories, Inc.-Laboratory Supervisor (1978-1979)
SERCO Laboratories, Inc.-Division Manager (1979-present)

Position: Chemist
Employee: David W. Havick
Education: B.A. Chemistry, University of Northern Iowa
Experience: Helena Chemical Company-Quality Control Superintendent (1977-1979)
SERCO Laboratories, Inc.-Chemist (1979-present)

Position: Laboratory Supervisor
Employee: Kathleen A. Smit
Education: B.A. Chemistry, University of Northern Iowa
Experience: Corning Laboratories, Inc.-Chemist (1977-1979)
SERCO Laboratories, Inc.-Laboratory Supervisor (1979-present)

Position: Laboratory Coordinator
Employee: Cheryl L. Wilson
Education: Certified Laboratory Assistant, ASCP Hawkeye Institute of Technology
Experience: Corning Laboratories, Inc.-Laboratory Coordinator (1978-1979)
SERCO Laboratories, Inc.-Laboratory Coordinator (1979-present)

Position: Laboratory Technician
Employee: Marjorie Kloster
Education: Certified Laboratory Assistant, ASCP Hawkeye Institute of Technology
Experience: Iowa Methodist Medical Center-Laboratory Technician (1972-1975)
Schoitz Hospital-Laboratory Technician (1975-1976)
Carnation Dairy, Inc.-Laboratory Technician (1976)
Chamberlain Manufacturing, Inc.-Laboratory Technician (1977)
Corning Laboratories, Inc.-Laboratory Technician (1978-1979)
SERCO Laboratories, Inc.-Laboratory Technician (1979-present)

Position: Laboratory Technician
Employee: Linda Cmelik
Education: Certified Laboratory Assistant, ASCP Lakeland Medical, Dental School
Experience: Elkader Central Hospital-Laboratory Technician (1976-1977)
Corning Laboratories, Inc.-Laboratory Technician (1977-1979)
SERCO Laboratories, Inc.-Laboratory Technician (1979-present)

Position: Laboratory Technician, Treatment Plant Operations
Employee: Stephen A. Mrstik
Education: Kirkwood Community College
Experience: ADM Corn Sweetners-Operator, Laboratory Technician (1977)
City of Solon, Iowa-Operator, Laboratory Technician (1977-1978)
Water Quality Management-Operator, Laboratory Technician (1978-1980)
SERCO Laboratories, Inc.-Operator, Laboratory Technician (1980-present)

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SANITARY ENGINEERING LABORATORIES, INC.
1922 Main St., Box 625, Cedar Falls, IA 50613 (319) 277-2401
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Test Methods

Parameter	Method
Total Chromium	USEPA Test Methods for Evaluating Solid Waste
Lead	USEPA Test Methods for Evaluating Solid Waste
Toluene	USEPA Test Methods for Evaluating Solid Waste

Equipment

Parameter	Equipment
Heavy Metals	Perkin Elmer 620 Atomic Absorption Spectrophotometer
Organic Solvents	Perkin Elmer 3920 Gas Chromatograph

Sample Handling

All waste materials samples are stored at 4°C in an air tight, non-reactive container. The samples are prepared for analysis according to Test Methods for Evaluating Solid Waste. The EP Toxicity test is performed according to the instructions in Test Methods for Evaluating Solid Waste. The sample extracts are stored and preserved according to the EPA publication Methods for Chemical Analysis of Water and Wastes. All wastes are stored until at least two weeks after the results are reported.

Revised

ATTACHMENT A

PETITION FOR DELISTING

AMANA REFRIGERATION, INC.

AMANA, IOWA

SERCO
SANITARY ENGINEERING LABORATORIES, INC.
1922 Main St., Box 625, Cedar Falls, IA 50613 (319) 277-2401
CORNING DIVISION
OFFICES IN
MN • IOWA • IL

Waste Material Analysis

Client: Howard R. Green Company
Attn: Mr. Gene Fritch
4250 Glass Road N.E.
P.O. Box 9009
Cedar Rapids, Iowa 52409

Date Sampled: None Given

Date Received by Laboratory: 10/27/80

Sample Identity: Sludge from Paint Booth

Analysis

Parameter	Analytical Result		Date Analyzed
Chromium (as Cr)	920	mg/kg	11/21/80
Lead (as Pb)	5,400	mg/kg	11/21/80
Toluene	330	mg/kg	12/12/80

Prepared and Submitted by
SERCO LABORATORIES, CORNING DIV.

Kathleen A. Smit
Laboratory Supervisor

December 18, 1980
nh 287-2Y
CORRECTED REPORT
#1

SERCO
CORNING DIVISION

SANITARY ENGINEERING LABORATORIES, INC.
1922 Main St., Box 625, Cedar Falls, IA 50613 (319) 277-2401

OFFICES IN
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EP Toxicity Test

Client: Howard R. Green Company
Attn: Mr. Gene Fritch
4250 Glass Road N.E.
P.O. Box 9009
Cedar Rapids, Iowa 52409

Date Sampled: None Given

Date Received by Laboratory: 10/27/80

Sample Identity: Sludge from Paint Booth

Analysis

Parameter	Analytical Result		Date Analyzed
Chromium (as Cr)	0.11	mg/l	11/21/80
Lead (as Pb)	2.0	mg/l	11/21/80
Toluene	∠1	mg/l	12/15/80

EP Toxicity Test performed according to 40CFR, Part 261.24

Prepared and Submitted by
SERCO LABORATORIES, CORNING DIV.

Kathleen A. Smit
Laboratory Supervisor

December 18, 1980
nh 287-2Y
CORRECTED REPORT
#1A

∠ means less than

SERCO
SANITARY ENGINEERING LABORATORIES, INC.
1922 Main St., Box 625, Cedar Falls, IA 50613 (319) 277-2401
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SERCO Laboratories, Inc.-Operator, Laboratory Technician (1980-present)

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SANITARY ENGINEERING LABORATORIES, INC.
1922 Main St., Box 625, Cedar Falls, IA 50613 (319) 277-2401
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Test Methods

Parameter	Method
Total Chromium	USEPA Test Methods for Evaluating Solid Waste
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